Variable Pricing Feasibility Assessment

for

Defense Commissary Agency

March 17, 2004

Final Report

Dove Consulting
75 Park Plaza
Boston, Massachusetts 02116
(617) 482-2100
www.doveconsulting.com

Willard Bishop Consulting
840 S. Northwest Highway
Barrington, IL 60010
(847) 381-4443
www.bishopconsulting.com

Table of Contents

Appendices

1. Patron Reactions
2. Vendor Impact Analysis
3. Political Assessment
4. Supercenter Impact on the DeCA Savings Rate
5. DeCA Capabilities Assessment
6. Economic Model Sensitivity Analysis
7. Legislative Considerations
8. Demonstration Project Feasibility
9. Economic Assessments (Options 1, 2, 3 and 4)
10. Cost-to-Serve Analysis
11. Best Value Item Category-level Variety Requirements
12. Sources
13. Interviews

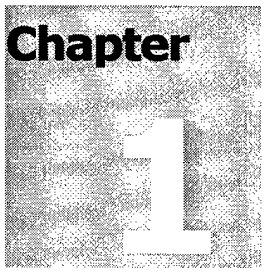
Study Authors:

Dove Consulting:

Laura Fuller, Senior Consultant
David Robinson, Managing Director

Willard Bishop Consulting:

Jon Hauptman, Vice President
Paul Weitzel, Vice President



Executive Summary

The Defense Commissary Agency (DeCA) engaged the joint project team of Dove Consulting (Boston, MA) and Willard Bishop Consulting (Barrington, IL) to evaluate the practicality of using a variable pricing system within DeCA to maintain an average of 30 percent customer savings and lower appropriated fund costs. This study was commissioned on January 12, 2004 with a 45 day performance period.

This document describes the objectives, methodology, analysis and conclusions of the DeCA Variable Pricing Feasibility Study.

Study Objectives

The primary objective of this study is to provide an assessment of the feasibility of using a variable pricing system within DeCA to reduce appropriated fund costs while sustaining a 30% customer savings rate (the "Variable Pricing Objective"). The Statement of Work requested a comprehensive assessment of the practicality of variable pricing within DeCA which takes into consideration the relevant economic, qualitative and political issues.

Variable pricing as defined by the amendment to the Statement of Work means "setting prices to return varying levels of gross profitability. While no overall gross profit objective has been defined, the technical mechanism to be studied (variable mark-ups) is essentially the same as a commercial grocer (or retailer) would use... The 5% surcharge will be unaffected by variable pricing; the surcharge can be viewed as a sales tax within this context." [1] The project team used this definition of variable pricing to evaluate potential options or scenarios for implementing variable pricing within DeCA.

In addition, the Statement of Work requires several specific analyses and deliverables:

- Feasibility assessment of expanding DeCA's Best Value Item program to industry norms, as a means of meeting the Variable Pricing Objective.

---

[1] Defense Commissary Agency, Solicitation # HDEC08-04-T-0012, Amendment 0001, Attachment 2, December 8, 2003.

- Evaluation of DeCA's category management capability and estimate of the impact of an expanded BVI program on shelf-space allocated to leading national brands, and second- and third-tier national brands.

- Evaluation of DeCA's capability to use variable pricing to manage the price gap between Best Value Item products and national brand products; financial impact assessment.

- Desirability of DeCA conducting a demonstration project in commissaries and NEXMARTs

- Identification of management and legislative actions and timetable required to implement recommendations.

Methodology

The project team used a three-phased framework to conduct the research and analysis, and to develop conclusions to address the Variable Pricing Objective.

The three phases of the project were:

1. Stakeholder Considerations and Impacts: This phase was conducted over the first 30 calendar days of the project engagement and included over 60 interviews with key DeCA stakeholders to gain the perspective of the DeCA patrons, business partners and policy makers, as well as to assess DeCA's capabilities in the areas of category management, pricing and variable pricing program management.

2. Variable Pricing Strategy Analysis: The second phase of the project was conducted concurrently with the first, and focused on reviews of academic studies related to grocery pricing strategies and patron impacts, and external benchmarking to assess potential variable pricing strategies, gaps within the DeCA organization, and potential costs.

3. Variable Pricing Feasibility Assessment: The final project phase incorporated all project learnings into an economic model which evaluated all possible approaches to variable pricing at DeCA that have the potential to meet the Variable Pricing Objective. Each option was evaluated first on an economic basis to determine the feasibility of capturing a margin which could be used to lower the annual appropriation, while maintaining at least a 30% customer savings rate. The economic analysis included quantifiable patron and vendor impact assessments to provide a comprehensive and objective view of the practicality of each option. If an option failed to produce a positive economic result, and therefore failed to satisfy the Variable Pricing Objective, it was not considered further. Options passing the economic threshold were then evaluated from a qualitative and political perspective.

Options Considered and Results

Variable pricing would require DeCA to change its business model from that of selling goods at cost (plus the 5% surcharge) to a model where goods are sold at cost plus a (variable) margin. Because there is no margin in the DeCA system today, any variable pricing approach would need to source margin from either patrons (lowering the savings rate) or national brand vendors (reducing product costs to DeCA).

With the implementation of a variable pricing system at DeCA, patrons and vendors will react to any business model change that impacts their economic situation; these reactions from patrons and vendors due to any combination of variable pricing actions are quantifiable with a high confidence and are included in all scenarios assessed.

Through the project's research and consideration of the study's requirement and definition of variable pricing, four approaches to variable pricing at DeCA were researched and considered for evaluation. These four approaches provide a comprehensive study of all potential options for implementing variable pricing within the DeCA environment that have the potential to meet the Variable Pricing Objective:

1. Implementing a full variable pricing system across all SKUs to increase prices and create a margin, reducing the customer savings rate from current levels to 30%.

   Result: This option generates a negative financial impact of $29 million, due primarily to projected offsets from impacts on vendor promotional and stocking support.

2. Reducing product acquisition costs from vendors, but maintaining current customer price levels to create a margin.

   Result: This option generates a negative financial impact of $61 million, due primarily to projected offsets from impacts on vendor promotional and stocking support.

3. Reducing product acquisition costs from vendors and sharing the savings achieved with consumers, to potentially drive incremental volume and build margin.

   Result: This option generates a negative financial impact of $88 million, due to lowered positive margin effects (compared to Option 2) coupled with projected offsets from impacts on vendor promotional and stocking support.

4. Expanding the Best Value Item (BVI) program and implementing variable pricing on BVI items only to better manage the price gap between leading national brands and best value item products and create a margin.

   Result: This option generates a result which is marginally positive, $21 million, a level well below the "gain threshold" needed to overcome uncontrollable outcomes and adverse risks. It also results in lost sales of $133 million.

Summary Conclusions

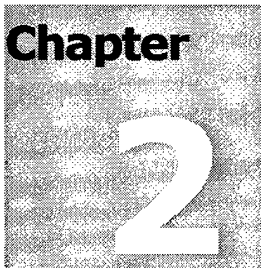
In most variable pricing scenarios, quantifiable offsets due to projected patron and/or vendor reactions, plus ongoing operating costs, lead to a negative financial result in the form of a negative margin which would require an appropriation increase. Only one of the four variable pricing scenarios generates a positive financial result, however the level is considered too small to overcome potential risks any variable pricing implementation would face.

As summarized above, the economic analysis of each variable pricing option assessed shows that variable pricing is not a feasible means for DeCA to reduce the appropriated funds required while maintaining a 30% savings rate.

Based on our economic analysis, we can also conclude that DeCA's current pricing model is the most efficient method to maximize and transfer vendor support directly to DeCA patron savings. Assessment of DeCA's operational efficiency was not included in the scope of our work.

Accordingly:

- DeCA should not implement variable pricing.
- A demonstration project is not required, since variable pricing will not be implemented.
- No legislative change will be required.



Background, Objectives and Methodology

The Defense Commissary Agency (DeCA) engaged the joint consulting team of Dove Consulting (Boston, MA) and Willard Bishop Consulting (Barrington, IL) to evaluate the practicality of using a variable pricing system within DeCA to maintain an average of 30 percent customer savings and lower appropriated fund costs. This study was commissioned on January 12, 2004 with a 45 day performance period.

Background

The Defense Commissary Agency (DeCA) is a Department of Defense Agency that manages and operates supermarkets for the armed services throughout the world. Currently, DeCA operates 275 stores, 171 in the 48 contiguous United States and 104 located elsewhere throughout the world.

The Department of Defense operates the Defense Commissary Agency, by authorization of Congress, as an integral element of the military pay and benefits package. The intent of the commissary system is to provide an income benefit through savings or discount purchases on food and household items necessary to subsist and maintain the household of the military member and family for the inclusive period of compensated duty/service.[2] Commissary privileges are extended to active, reserve and guard members of the Military Departments, their families, retirees and others as defined in DOD Directive 1330.17R, Armed Services Commissary Regulation.

DeCA's patron benefit was last calculated at 32.1% in October 2003[3]. The DeCA savings rate is calculated annually and is a comparison of DeCA product price levels to the same products available in the commercial sector (weighted on the basis of DeCA sales volume) and in the local market. The savings rate is an aggregate of savings delivered in commissaries worldwide vs. the commercial sector, rather than a constant savings rate within a local market area. The rationale for this approach to customer

---

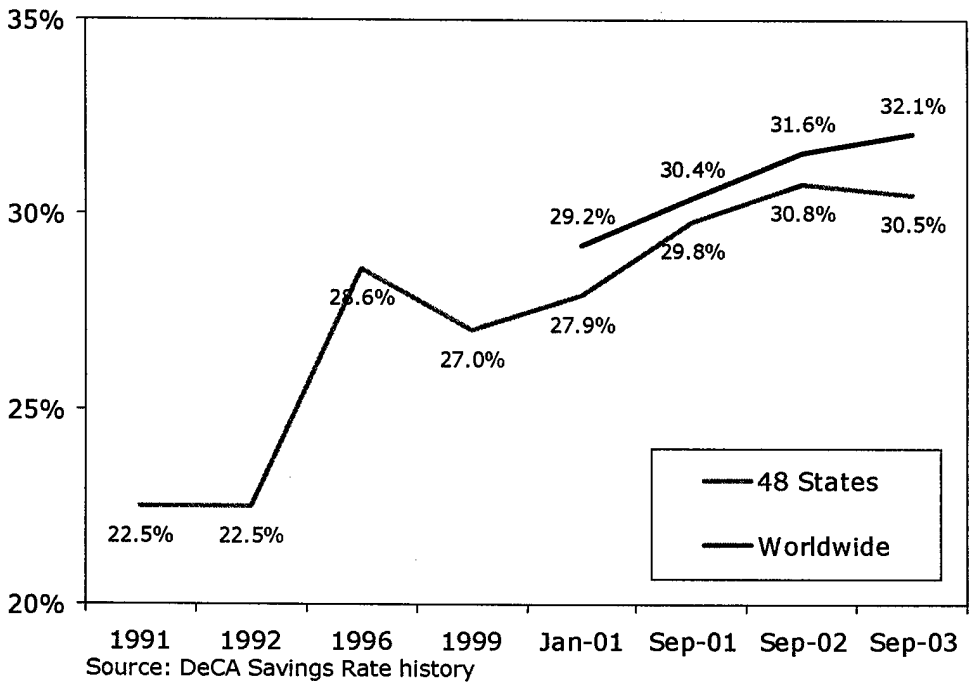
[2] DOD 1330.17-R, Abstract, Armed Services Commissary Regulations (ASCR), April 1987.

[3] DeCA Price Comparison Study, October 2003.

savings is to guarantee the military patron a consistent price level regardless of where he or she may be stationed.

While the amount of the commissary benefit is not legislated, Chapman Cox (Assistant Secretary of Defense, 1987) in his forward to the Armed Services Commissary Regulation, stated that "based upon current considerations, it is desired that funding request be targeted to maintain a 25% average savings on purchase in the military commissary system as compared to private sector supermarkets."[4] Recent comments from the Department of Defense, including the Statement of Work for this study, have suggested that the customer savings benefit should be maintained at a 30% savings level as compared to the commercial sector. Please see Appendix 4 for additional information on the DeCA savings rate today.

DeCA Savings Rate History



Source: DeCA Savings Rate history

DeCA sells products to patrons at cost plus a mandated surcharge of five percent added at the point of sale. DeCA sales (excluding the surcharge) were $5,037 million in 2003. Proceeds from sales are applied to the Commissary Resale Stocks Fund which finances the resale inventory; sales of commissary products generate revenue that DeCA uses to

[4] DOD 1330.17-R, Foreward, April 1987.

replenish the commissary inventory. No additional costs are paid through funds generated from DeCA sales today.

Proceeds from the surcharge (5% applied to all purchases at point of sale) fund were $251 million in 2003 and by law may be only used to cover capital expenses, such as construction, repair, improvements, and maintenance of facilities, stores, equipment or technology.[5]

DeCA's operating expenses are funded through an annual Congressional appropriation; in FY 2003 the Congressional appropriation was $1,080 million. Commissary operating expenses, which shall be paid by appropriated funds, include personnel costs, transportation costs outside the United States, services (such as police and fire protections, garbage removal, sewage disposal, grounds maintenance, accounting and administrative services), utilities outside the 48 contiguous states, major losses and construction costs related to expansion of the military installation or relocation of facilities for the convenience of the government. [6]

Objectives

The primary objective of this study is to provide an assessment of the feasibility of using a variable pricing system within DeCA to reduce appropriated fund costs while sustaining the 30% customer savings rate.

Currently DeCA receives nearly $1.1 billion in annual Congressional appropriation to support DeCA operations. Within the Department of Defense, there is interest in lowering this level of appropriation below $1 billion annually, while maintaining the customer savings rate at 30% or better.

In addition to the primary objective of the Variable Pricing Feasibility study detailed above, the Defense Commissary Agency has requested the following specific analyses and deliverables:

1. Assessment of the feasibility of expanding DeCA's Best Value Item product line to align more closely with industry norms.

2. Evaluation of DeCA's category management capability and estimation of the worldwide impact on shelf space allocated to leading national brands and second- and third-tier national brands.

3. Evaluation of DeCA's capability and estimation of the financial impact of using variable pricing to manage the price gap between the best value and national

---

[5] US Code Title 10, Subtitle A, Part IV, Chapter 159, Section 2685.

[6] DOD 1330.17-R, Paragraph 4-404, Armed Services Commissary Regulations (ASCR), April 1987.

brand products to conform to industry best business practices while sustaining an average 30 percent savings on all products.

4. Assessment of the potential to conduct a demonstration project in commissaries and NEXMARTs.

5. Identification of management and legislative actions and timetables required to implement recommendations.

Methodology

This study was conducted in accordance with the Statement of Work, which outlined an assessment of the practicality of using variable pricing to achieve a reduction in the appropriation while maintaining the customer savings rate, as well as five supporting deliverables (outlined in the prior section). Variable pricing as defined by the amendment to the Statement of Work means "setting prices to return varying levels of gross profitability. While no overall gross profit objective has been defined, the technical mechanism to be studied (variable mark-ups) is essentially the same as a commercial grocer (or retailer) would use... The 5% surcharge will be unaffected by variable pricing; the surcharge can be viewed as a sales tax within this context." [7] The project team used this definition of variable pricing to evaluate potential options or scenarios for implementing variable pricing within DeCA.

In addition, the project team was asked by DeCA to consider the issue from three perspectives:

1. Analytic – projection of the business results that would arise from introducing a variable pricing strategy

2. Intuitive or qualitative – potential issues associated with changing DeCA's business model

3. Political – both in the traditional sense and with trading partners and patrons.

The project team used a three-phased framework to conduct the research and analysis, and develop conclusions to address the study's objective of assessing the feasibility of implementing variable pricing at DeCA to achieve a margin which would be used to lower appropriated fund costs while maintaining the customer savings rate at a 30% level.

The three phases of project analysis are:

---

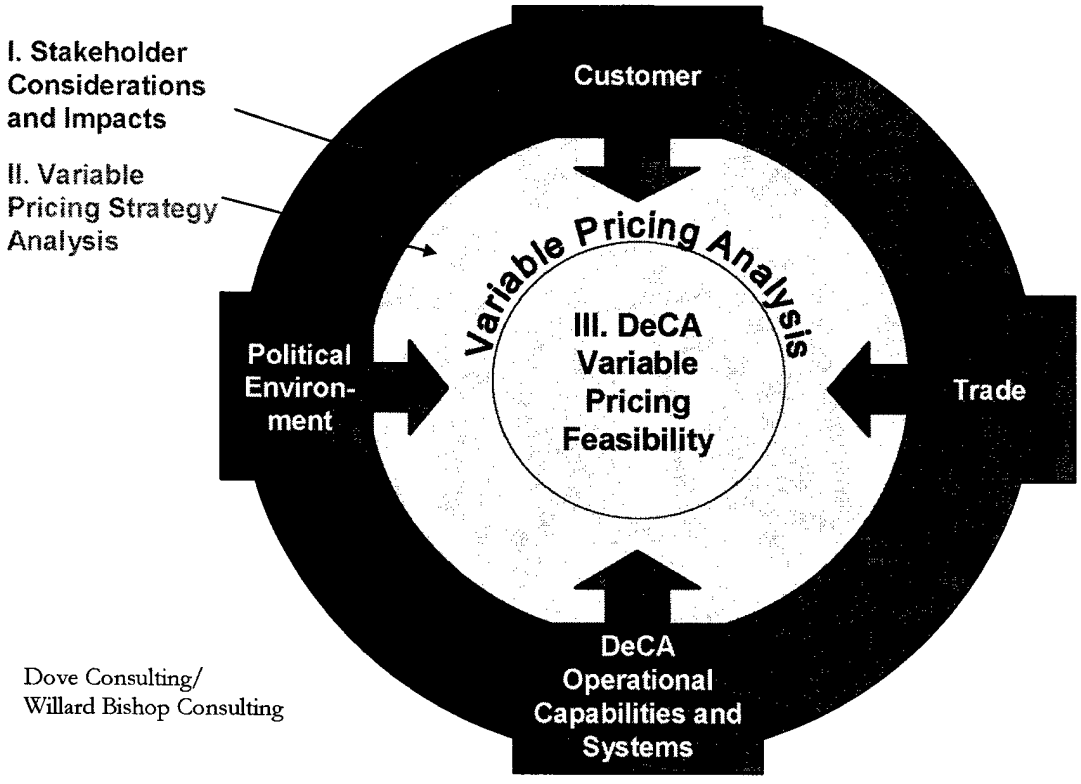
[7] Defense Commissary Agency, Solicitation # HDEC08-04-T-0012, Amendment 0001, Attachment 2, December 8, 2003.

1. Stakeholder Considerations and Impacts: This phase was conducted over the first 30 calendar days of the project engagement and included over 60 interviews with key DeCA stakeholders to gain the perspective of the DeCA patrons, business partners, policy makers, and to assess DeCA's capabilities in the areas of category management, pricing and variable pricing program management.

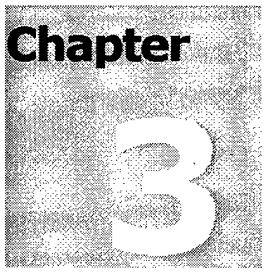
2. Variable Pricing Strategy Analysis: The second phase of the project was conducted concurrently with the first, and focused on reviews of academic studies related to grocery pricing strategies and patron impacts, and external benchmarking to assess potential variable pricing strategies, gaps within the DeCA organization, and potential costs.

3. Variable Pricing Feasibility Assessment: The final project phase incorporated all project learnings into an economic model which evaluated all four possible approaches to variable pricing at DeCA that have the potential to meet the Variable Pricing Objective. Each option was evaluated first on an economic basis to determine the feasibility of capturing a margin which could be used to lower the annual appropriation while maintaining at least a 30% customer savings rate. The economic analysis included quantifiable patron and vendor impact assessments to provide a comprehensive and objective view of the practicality of each option. If an option failed to produce a positive economic result, and therefore failed to satisfy the Variable Pricing Objective, it was not considered further. Options passing the economic threshold were then evaluated from a qualitative and political perspective.

Project Analytical Framework



Dove Consulting/
Willard Bishop Consulting



Variable Pricing Strategies and Implications for DeCA

Variable Pricing Overview

Variable pricing is a strategy commonly used in the commercial grocery sector which allows retailers the flexibility to uniquely price some or all items to return varying levels of gross profit for some or all items and to support their strategic objectives. The retailer may choose to uniquely price items within the store, within select categories, and/or within departments based on a series of rules or guidelines which support their objectives.

The objective of a variable pricing strategy is generally to accomplish one or more of the following:

- To maximize sales
- To maximize or enhance profits
- To improve competitive position
- To improve consumer price image

Each retailer has a unique strategic objective that a variable pricing strategy allows them to pursue through the adjustment or manipulation of consumer prices. For example, the retailer may choose to price certain items below cost (these items are commonly known as "loss-leaders" within the industry) to increase store traffic, knowing that when the consumer is in the store because of the price advantage available on these products, he/she is likely to purchase other complementary items to which the retailer has applied a higher margin. By pricing some goods, which drive store traffic, at a loss and others at a high margin, the retailer is using variable pricing to support their total margin objectives while also influencing competitive position and price image in the eyes of the consumer.

Commercial grocers will price goods to recover their total costs and achieve a margin. Total product cost for a retailer includes:

- Cost of good sold (product cost from the manufacturer)
  - Manufacturer's cost of goods
  - Manufacturer's distribution expense (to the retailer's warehouse)
  - Manufacturer's selling and marketing expense
  - Trade and consumer spending
  - Other allocated costs (capital expense, cost of syndicated data)
  - Manufacturer's margin
- Distribution expense (retailer's cost to transport the product from the warehouse to the store)
- Sales and marketing allocation
  - Consumer advertising and promotions
  - Buying, category and space management
  - Sales operations expense (shelf stocking, store operations)
- Overhead allocation

Within the retail environment, pricing is managed at a category and market level where pricing specialists will apply variable margins to set SKU-level shelf and promotional prices to achieve objectives for the category, department, and total store.

Gap management is also an important component of achieving strategic objectives and reinforcing the store's consumer price image. In setting SKU-level prices, the retailer will consider both external and internal price gaps:

- External price gap – prices versus key market area competitors
- Internal price gap – within the store, national brand prices (top-tier) versus private label/control brand prices (lower tier)

Commercial supermarket chains do not typically offer identical prices across all their stores. Instead, retailers commonly practice **zone pricing** in which item, category, and department price levels are based on costs associated with operating in a particular area and/or the competitive environment around individual stores. For example, a chain operating a store near a Wal-Mart Supercenter (or any other recognized low-price leader) may "zone price" by offering lower prices throughout that store than they offer at stores that they operate in other neighborhoods or markets without such strong price competition. As another example, a chain located across the street from a pet superstore may offer lower prices in the pet aisle than they would at a store without such strong competition in the pet category.

It is not uncommon for medium-to-large size supermarket chains to manage 5-to-10 (or more) unique price zones within a single market area. Administering the zone pricing process requires retailers to have strong competitive information, analytical skills and internal price management systems to help set and maintain all prices.

Variable Pricing Strategies

There are three prevalent pricing strategies used in the commercial grocery industry today.

Everyday Low Price (EDLP)

Under the classical Everyday Low Price (EDLP) strategy, retailers charge constant, lower everyday prices with no temporary price discounts, (i.e., the best prices are available on the shelf everyday). This eliminates the week-to-week price uncertainty that characterizes Hi-Lo pricing strategies (Hoch, Dreze, Purk 1994).[8]

- Promotions – Vendors doing business with classical EDLP operators are asked to build all promotional monies into the everyday shelf price. EDLP retailers may offer special prices to create excitement and build traffic, but they are limited to seasonal and/or in-and-out merchandise, (i.e., not regular shelf stock).
- Margin Management – EDLP operators may set unique margins for products at the item, category, and department levels.
- Retailers – No major supermarket chain today can be considered a classical EDLP operator. All supermarkets offer some types of promotional discounts on regular merchandise. Instead, alternative format food retailers such as Aldi (limited-assortment store format) and Costco (membership warehouse club format) tend to follow an EDLP pricing strategy.

EDLP-Plus/Hybrid EDLP

EDLP-Plus/Hybrid EDLP is a variation on classical EDLP that allows the retailer to offer promotional discounts.

- Promotions – While the best prices are often available everyday, EDLP-Plus/Hybrid EDLP operators offer frequent promotions—at moderate promotional depths—to create excitement and drive traffic and transaction size.
- Margin Management – EDLP-Plus/Hybrid EDLP operators set unique margins for products at the item, category, and department levels.

---

[8] Hoch, Stephen J., Xavier Dreze, Mary E. Purk (1994), "EDLP, Hi-Lo, and Margin Arithmetic," Journal of Marketing, April 1994.

- Retailers – Wal-Mart Supercenter and HEB are examples of two retailers who operate an EDLP-Plus/Hybrid EDLP pricing strategy.

Hi-Lo

Hi-Lo strategies are used by promotion-oriented retailers who charge "higher" everyday shelf prices that are offset by frequent, deep promotions across the store.

- Promotions – Promotional discounts at Hi-Lo retailers are supported by vendor promotional funding, and create prices that are temporarily lower than shelf prices at EDLP or EDLP-Plus operators. The deepest discounts are typically offered for one week, while a wide variety of temporary price reductions are often available for four to six weeks.
- Margin Management – Hi-Lo operators set unique margins at the item, category, and department levels, and actively manage the blend of promotional and shelf prices to reach margin objectives.
- Retailers – National supermarket chains such as Albertson's and Kroger are examples of supermarket retailers employing a Hi-Lo pricing strategy.

A Comment about Frequent Shopper Programs

Frequent shopper programs (FSPs) are often referred to in the context of pricing strategies; the use of FSPs are a common tactic employed by commercial supermarket retailers to communicate and execute their variable pricing strategies.

Frequent shopper programs (also known as loyalty marketing programs) provide selected promotional offers to consumers who have signed up for a retailer-specific frequent shopper card and present it at checkout.

- Key Retailer Benefits:
    - Regulate dispersal of promotional offers to cardholders/program members.
    - Supply retailers with valuable household-specific information/insights into the purchase behavior of their shoppers.
    - Provide retailers with a vehicle for targeted marketing.
- Retailer Use:
    - Frequent shopper programs are used by approximately 40% of supermarket retailers comprising 40% of supermarket industry sales.

- U.S. household penetration of frequent shopper cards has reached 75%, and is upwards of 95% in selected large markets such as New York City, Chicago, Denver.[9]

Variable Pricing at DeCA: Differences and Implications

DeCA currently operates within a business model where products for resale are sold to patrons at cost plus a 5% surcharge added at the point of sale. In this current business model, there is no margin generated from the sale of goods in commissaries; all funds generated from the 5% surcharge may only be used for capital expenses. Changes in product costs are passed on to customers through commissary pricing. Most operational expenses are paid through an annual Congressional appropriation.

In the commercial grocery model, grocers price goods above cost in order to generate a margin, which they use to fund operating expenses and capital expenditures. Through the use of variable pricing strategies to manage gross margin (customer price above vendor costs) and diligence in controlling operational costs, grocers manage the system to a profit at the end of the year (gross margin less operational costs).

Differences between DeCA's current operating model and traditional commercial grocery model will impact any variable pricing initiative at DeCA intended to create a margin to offset the annual appropriation.

1. Supermarkets have an existing margin to manage and use variable pricing strategies to uniquely price items to best achieve their strategic objectives.

2. DeCA currently has no margin. Implementing variable pricing to create a margin available to offset appropriations requires DeCA's business model to change.

First, any variable pricing scheme must create a margin. In the current business model, sales of product by DeCA do not create a margin for DeCA. Rather, savings, currently 32.1% over commercial alternatives, are generated for the customer. If DeCA were to create a margin, there are only two possible sources.

1. By raising prices to patrons, with the risk of changing the customer savings level.

2. By reducing product costs from vendors.

Next, any margin generated by either raising customer prices or reducing costs from vendors will also be impacted by quantifiable patron and vendor responses to these

---

[9] Partners in Loyalty Marketing Inc.

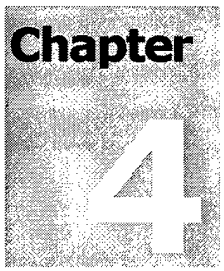
moves, creating economic offsets to any option which at first glance appears to offer a positive outcome.

Before evaluating any specific variable pricing alternative, it is helpful to review how DeCA's business model will change with a variable pricing system. At the most basic level, variable pricing means that customer price does not equal product cost to the retailer (see table below). Changes to prices can influence margins, changes to cost not passed on to the customer prices will directly impact margin. It is important to understand how these factors work together and can ultimately contribute to the success or failure of any variable pricing initiative.

In Chapters 5 – 8 of this report, several potential variable pricing options are analyzed. Each potential scenario begins with a change to either customer prices or product costs from vendors. However, the effect on margin (and ultimately the funds available to offset the appropriation) is not complete by assessing the first move alone. Patrons and vendors have a vested interest in DeCA and will react if their benefits, product assortment, prices or shelf-space are affected by a variable pricing option. Potential reactions from the patron side include increasing or decreasing their patronage of DeCA commissaries because of price changes or changes in product assortment. Vendors currently provide DeCA with greater levels of support than they provide to the commercial sector. If DeCA's business model were to change, these levels of support would change affecting DeCA's cost position directly (see Appendix 2 for additional details on vendor support). The table below summarizes how prices, patrons and vendors can move or react, and how those moves will affect margin available to offset the appropriation.

Differences between DeCA's Business Model and a Variable Pricing Model

Business Model Variables	DeCA Model Today	Variable Pricing Model
Customer Prices	• Price = product cost • Price change may affect the customer savings rate	• Prices are set independently of product cost • **Price change influences margin** • Price change may affect the customer savings rate
Vendor Prices to DeCA	• Change in vendor price causes same $ value change in customer price	• Changes not necessarily passed on to customer price • **Cost change influences margin**
Patron Reaction (positive or negative)	• Sales volume will change	• Sales volume will change • **Total margin dollars will change**, but margin percent does not change
Vendor Reaction	• Today all changes in vendor support are reflected in DeCA's prices to the customer	• Changes in vendor support will change DeCA's costs but not necessarily prices; **total margin will increase or decrease by the change in vendor support.**



Introduction to Variable Pricing Options

The Statement of Work requirement to assess the practicality of using variable pricing within the DeCA system is that any solution must continue to maintain a 30% customer savings rate while creating a margin to lower appropriated fund costs.

In addition, variable pricing as defined by the amendment to the Statement of Work means "setting prices to return varying levels of gross profitability. While no overall gross profit objective has been defined, the technical mechanism to be studied (variable mark-ups) is essentially the same as a commercial grocer (or retailer) would use... The 5% surcharge will be unaffected by variable pricing; the surcharge can be viewed as a sales tax within this context." [10]

Given this requirement, this study examined four unique approaches to variable pricing to achieve these economic objectives within DeCA:.

1. Implementing a full variable pricing system across all SKUs to increase prices and create a margin, reducing the customer savings rate from current levels to 30%.

2. Reducing product acquisition costs from vendors, but maintaining current customer price levels to create a margin without a change to consumer prices.

3. Reducing product acquisition costs from vendors and sharing the savings achieved with consumers, to potentially drive incremental volume and build margin.

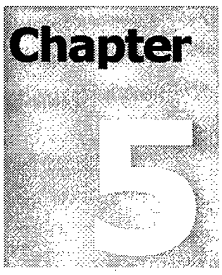
4. Expanding the Best Value Item (BVI) program and implementing variable pricing on BVI items only to better manage the price gap between leading national brands and best value item products and create a margin.

---

[10] Defense Commissary Agency, Solicitation # HDEC08-04-T-0012, Amendment 0001, Attachment 2, December 8, 2003.

We established a "hurdle rate" of $50 million net positive margin gain for any alternative to be considered a viable candidate for implementation. There are significant risks and "uncontrollables" in vendor and patron reaction that could be worse than our models project, and could eliminate most or all of a $50 million gain (on this basis, an argument could be made that the hurdle rate should be $100 million). In addition, DeCA should only take on the adverse impacts to patron benefits, patron loyalty, and DeCA reputation if the economic result is large enough to be worthwhile.

The following four chapters provide additional background and details regarding the different business models and provide a comprehensive economic analysis supporting the practicality of each option above.



Option 1: Variable Pricing to Reduce Savings Level to 30%

Overview

In October 2003, DeCA's Price Comparison Study measured the worldwide DeCA patron savings rate at 32.1% (including the impact of taxes and the DeCA surcharge) over commercial retailers. This option examines the impact of using variable pricing techniques to apply a margin to over 95% of DeCA stock keeping units (SKUs) in order to create an offset to the current appropriation while also maintaining the savings rate at 30%. Essentially, Option 1 examines the effect of raising average prices at DeCA to generate a margin, creating an offset the appropriation, and to reduce the patron savings rate from 32.1% to 30%.

Economic Assessment

Please refer to Economic Assessment 1 in Appendix 9 for the detailed economic analysis supporting this narrative.

In considering the potential impact of a price increase on current DeCA sales levels, the analysis examined 2003 DeCA sales by department and excludes two categories of goods, tobacco products and soft drinks sold in overseas commissaries and acquired through the Exchange system. These items are excluded because the Exchange system already includes a margin, which is in the price received from that group. As a result, the baseline sales for Option 1 begin with 2003 sales of $4,826 million, after excluding $197 million in tobacco sales and $14 million in overseas soft drinks.

The first step in the analysis is to examine the impact of a price increase on adjusted 2003 DeCA sales. As noted in Economic Assessment 1, DeCA price levels were increased an average of 2.2% which generates $106 million in additional sales and margin (the volume of goods sold does not change, just the price at which the same volume of goods is sold), dropping the savings rate to 30.6%.

	Option 1	
	Sales Impact	**Margin Impact**
Prices/Margin		
Price Change	$ 106,184,816	$ 106,184,816
Margin Change	$ -	$ -
	$ 106,184,816	$ 106,184,816
Patron Reaction		
To Price Changes	$ (79,910,832)	$ (1,720,194)
To Product Variety Changes	$ -	$ -
	$ 26,273,985	$ 104,464,622
Business Partner Reaction		
Loss of Vendor Stocking Support	$ -	$ (43,861,984)
Change in Promotional Support	$ -	$ (126,174,270)
Customer Acceptance of Price Increase (loss of promotional support)	$ 41,637,509	$ 41,637,509
	$ 67,911,494	$ (23,934,123)
Incremental Costs	$ -	$ (4,941,000)
Net Impacts	**$ 67,911,494**	**$ (28,875,123)**

The reader should note that this move alone does not drive the savings rate to its minimum target value of 30%, prices would need to increase ~3.1% to drop savings to the 30% minimum. However, once the patron and vendor reactions are considered, a price increase of 2.2% will ultimately result in savings dropping to 30%. Any higher price increase results in customer savings falling below the 30% threshold, eliminating the option.

If DeCA changes its business model to a for-profit variable pricing model and increases consumer prices, both the DeCA patron and the DeCA vendor will react, impacting DeCA sales, surcharge collection, customer savings rate, and potential margin.

Patron Reaction

It is well-documented that patrons react negatively to price increases, reducing their shopping a quantifiable amount for each price point increase. In Option 1, DeCA raises customer prices an average of 2.2%. This will have a -1.62% effect on sales or an annual decline in DeCA sales of nearly $80 million, reducing the $106 million in margin to $104 million.

Please see Appendix 1 for the detailed assessment of Patron Reactions.

Vendor Impacts – Vendor Stocking and Reset Support

DeCA's introduction of variable pricing creates several risks in terms of vendor support currently received. DeCA's vendors provide a unique level of support in the form of labor for shelf-stocking and to support store resets. The current vendor contract support is unique to the commissary system; this support is not provided to any other retail customer including Wal*Mart, and as such, it will be the first level of support eliminated if DeCA moves to a full variable pricing program. Vendors will not provide the "extra" support if DeCA becomes a for-profit entity. (Please see Appendix 2 – Vendor Impact Analysis for a detailed analysis of vendor reactions.)

The loss of this vendor support and DeCA's higher additional cost to fill the void, i.e., DeCA stocking cost per case averages $.62 versus a vendor cost of $.33, creates a net increase in annual operating costs of nearly $44 million, further reducing the potential margin to $60.6 million. DeCA will need to source this loss and absorb the additional cost (rather than pass the additional cost on to the customer) in order to stay above the 30% customer savings target.

Vendor Impacts – Vendor Promotional Spending

In addition to the risk of losing vendor stocking and reset support, variable pricing creates additional risks to the higher level of promotional funding currently received from vendors – on average, vendors spend an additional 2.6% points more on promotional funding to DeCA than traditional grocery retailers. Option 1 will result in DeCA operating in a complete profit model where all categories would be managed using a variable pricing scheme. Under this scenario, vendors will pull back promotional funding surplus and support and would shift this spend to other channels and other customers where they could generate a greater return on their investment. In a profit model, vendors do not believe DeCA will continue to pass on all promotions (often quoted as a significant benefit for vendors) because a portion of the funding will be kept to create an inside margin and profit, a common practice found in the commercial supermarket channel.

Based on the cost-to-serve analysis, vendor interviews and an extensive understanding of how the grocery industry operates, we expect all of the current promotional surplus (2.6% of sales) that DeCA enjoys will erode if Option 1 is implemented. This loss of promotional funds equates to $126.1 million annually, reducing the potential margin to $(65.6) million.

We expect that one-third of the surplus promotional sales (33% of 2.6%) will be retained at the higher everyday price. In other words, a third of the customers will still need the item and therefore will make the purchase at the higher price. Thus, there will be an annual profit generated from these higher prices in the amount of $41.6 million, which increases the potential margin to $(23.9) million.

Please see Appendix 2 – Vendor Impact Analysis for a detailed analysis of vendor reactions.

Capability Requirements

Implementing a variable pricing system to meet the requirements of Option 1 would require significant changes to DeCA's category management and pricing capabilities. Option 1 will require the capabilities similar to commercial sector requirements to support full variable pricing within DeCA.

On the category management side, these requirements include:

- Expansion of DeCA's category management group from current staffing of 6 Full-time Equivalents (FTEs) to a size and capability comparable in industry for a 250 store chain, or 25 FTEs. Additional annual costs = $1,915,200.

- Expansion of DeCA's space management capability from current staffing of 8 FTEs to 13 FTEs. Additional annual costs = $441,000

- Supporting systems, technology and information resources for the expanded category management group. Additional annual costs = $600,000.

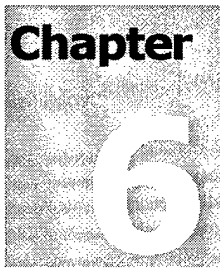
In addition, Option 1 requires additional staff hired and trained to manage pricing at category, item and/or market levels, supported with supporting price optimization systems. Additional personnel costs = $600,000 annually, with annual systems, technology and information resources costs of $1,385,000.

Additional operating costs to support the expanded category management and price management capabilities = $4,941,000 annually, reducing the potential margin to $(28.9) million.

These requirements are detailed in Appendix 5 – DeCA Capabilities Assessment.

Conclusions

Option 1 results in a decrease in the customer savings rate to 30% and a negative margin, $(28,875,123), which does not support the Variable Pricing Objective, and would require an annual appropriation increase. Since the economic analysis shows that Option 1 is not viable, no further assessment of qualitative and political considerations related to the option was performed. DeCA should not implement Option 1.



Option 2: Lower Product Costs to DeCA, but Maintain Customer Price Levels

Overview

As described in Chapter 3 – Variable Pricing Strategies and Implications for DeCA, a margin within the DeCA system can be sourced from two stakeholder groups with economic interest in the DeCA system, patrons or vendors. Option 2 examines sourcing additional margin from the vendor community, while maintaining current price levels to the consumer.

If additional margin can be realized from national brand vendors, DeCA's interaction and negotiation with vendors would need to change in order for DeCA to secure lower prices from vendors and benefit from this margin. In many traditional grocery models, retailers have vendors compete for shelf space and product placement as a means to achieve lower product costs to the retailer. In the DeCA model, achieving the lowest possible product costs would need to become the priority for the procurement group, potentially sacrificing product variety and assortment within the category. Currently the procurement group sources products based on consumer demand and product availability (from the vendor); DeCA procurement and category management practices would need to evolve to a model where price is the primary driver of product sourcing and shelf space.

Currently vendors realize a greater margin through the DeCA channel than through the traditional grocery channel; potentially the opportunity is available to reduce product costs through the vendors. Additionally, most vendors achieve a greater share in DeCA than in traditional retail channels, primarily due to the lack of a private label offering and fewer tertiary brands. However, vendors also provide DeCA with exceptional levels of support not provided to traditional channels. Pressuring vendors to sacrifice margin puts these support levels at great risk.

Economic Assessment

Please refer to Economic Assessment 2 in Appendix 9 and the Cost-to-Serve Analysis in Appendix 10 for the detailed economic analysis supporting this narrative.

	Option 2	
	Sales Impact	**Margin Impact**
Prices/Margin		
Price Change	$ -	$ -
Margin Change	$ -	$ 55,582,111
	$ -	$ 55,582,111
Patron Reaction		
To Price Changes	$ -	$ -
To Product Variety Changes	$ (81,108,710)	$ (1,094,968)
	$ (81,108,710)	$ 54,487,143
Business Partner Reaction		
Loss of Vendor Stocking Support	$ -	$ (43,861,984)
Change in Promotional Support	$ -	$ (104,938,202)
Customer Acceptance of Price Increase (loss of promotional support)	$ 34,629,607	$ 34,629,607
	$ (46,479,103)	$ (59,683,436)
Incremental Costs	$ -	$ (1,000,000)
Net Impacts	**$ (46,479,103)**	**$ (60,683,436)**

In considering the potential impact of lowering product costs on potential DeCA margin and sales levels, the analysis examined 2003 DeCA sales by department and excludes random weight perishables (meat and produce) which are procured through another government agency, and tobacco which is purchased from the Military Exchange system. Random weight perishables are excluded because with another agency procuring these items, DeCA has little opportunity to influence price. Tobacco is excluded because the Exchange system includes a margin, which is included in the price received from that group. As a result, the baseline sales for Option 2 begin with 2003 sales of $4,117 million, after excluding $197 million in tobacco sales, $380 million in meat sales, and $342 million in produce sales. Please note that meat and produce provide DeCA with customer savings greater than the 32.1% (37% and 34.1% respectively), removing these items lowers the savings rate on DeCA sales remaining to 30.9%.

The first step in the analysis is to examine the impact of a margin increase on adjusted 2003 DeCA sales. From the Cost-to-Serve Analysis, national brand vendors achieve 2.7% point greater margin in sales to DeCA than in the commercial grocery sector. While it is aggressive to believe that DeCA could realize 100% of this 2.7% point differential across all national brand vendors, an additional 1.35% point margin is a realistic possibility. For Economic Assessment 2, DeCA margin levels were increased an average of 1.35%, without a change in customer price levels. This margin increase generates $55.5 million in additional margin (sales are not impacted at this point) without any impact to the customer savings rate.

Once DeCA changes its business model to a for-profit variable pricing model, reducing vendor costs will reduce product variety within the commissaries. DeCA patrons will react to the reduction in product variety and national brand vendors will react due the increased price pressure. Both these reactions will impact DeCA sales, surcharge collection, customer savings rate, and potential margin.

Patron Reaction

Vendor competition for shelf-space to obtain lower vendor prices to DeCA will reduce product variety within the commissaries by 16% from current levels, and will result in a product variety at DeCA which carries 30% fewer brands than commercial grocers. This is a significant gap. Patrons consider product assortment and variety as one of the factors in customer satisfaction and will react negatively to a further reduction from commercial norms. As a result of this decline in assortment, patrons will reduce their purchases from DeCA by nearly 2%, which will reduce sales by $81 million. This sales decrease reduces available margin by only $1 million to a margin impact of $54.5 million.

Please see Appendix 1 for the detailed assessment of Patron Reactions.

Vendor Impacts – Vendor Stocking, Reset and Promotional Support

While Option 2 is not a variable pricing program, the extreme pressure on vendors to reduce cost of goods while DeCA maintains/holds shelf prices so that an inside margin can be generated to reduce appropriations funds will be met with the same response as described in Option 1. The minute DeCA looks to generate a margin, vendors will react. We expect all of the extra/surplus promotional support and vendor stocking support will erode. Both are line items with budgets and are easily identifiable on the vendors' Profit and Loss statements.

The vendor reaction to Option 2 will result in increased cost to DeCA of $44 million to replace the level of vendor stocking and reset support currently received. Additionally, the current promotional surplus (2.6% of sales) that DeCA enjoys will erode if Option 2 is implemented. This loss of promotional funds equates to $104 million annually. We expect that one-third of the surplus promotional sales (33% of 2.6%) will be retained at the higher everyday price. In other words, a third of the

customers will still need the item and therefore will make the purchase at the higher price. Thus, there will be an annual profit generated from these higher prices in the amount of $34.6 million, reducing the customer savings rate to 30.3% on adjusted sales (to 31.6% on total sales).

The net impact, when all vendor reactions are considered, results in a $114 million margin loss, reducing the potential margin to $(59.7) million. DeCA will need to source this loss and absorb this cost (rather than pass on the additional cost to the customer) in order to maintain a 30% benefit.

Please see Appendix 2 – Vendor Impact Analysis for a detailed analysis of vendor reactions.

Capability Requirements

Implementing Option 2, while not a full variable pricing option, will require several supplements to DeCA's category management and pricing groups to meet the additional capabilities needed to administer this option. On the category management side, these requirements include:

- Expansion of DeCA's category management and space management group with an additional annual costs = $500,000.
- Supporting systems, technology and information resources for the expanded category management group. Additional annual costs = $350,000.

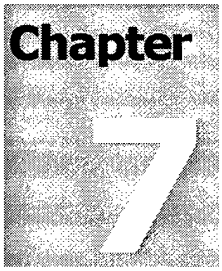
In addition, Option 2 will require additional pricing staff to manage and maintain price systems where product cost does not equal customer price. Additional personnel costs = $150,000 annually.

Additional operating costs to support the expanded category management and price management capabilities = $1,000,000 annually, reducing the potential margin to $(60.7) million.

These requirements are detailed in Appendix 5 – DeCA Capabilities Assessment.

Conclusions

Option 2 results in a decrease in the customer savings rate to 31.6% and a negative margin, $(60,683,436), which does not support the Variable Pricing Objective, and which would require an annual appropriation increase. Since the economic analysis shows that Option 2 is not viable, no further assessment of qualitative and political considerations was performed. DeCA should not implement Option 2.



Option 3: Reduce Product Costs to DeCA and Split Savings with Customers

Overview

Option 3 builds on the scenario described in the prior chapter, using the same capabilities to reduce product costs to DeCA but passing on half the savings achieved to the customer in the form of price reductions. While DeCA will only achieve half the margin as in Option 2, by sharing the savings with the customer, DeCA may enjoy both an additional sales and margin increase as customer purchases increase in reaction to a price decrease.

Economic Assessment

Please refer to Economic Assessment 3 in Appendix 9 and the Cost-to-Serve Analysis in Appendix 10 for the detailed economic analysis supporting this narrative.

The economic analysis of Option 3 begins at the same point as Option 2. By excluding meat, produce and tobacco from consideration (rationale detailed in Chapter 6), the assessment begins with 2003 sales of $4,117 million and a customer savings rate of 30.9% on DeCA sales remaining.

The first step in the analysis is to examine the combined impact of a price decrease and a margin increase on adjusted 2003 DeCA sales. From the Cost-to-Serve Analysis, national brand vendors achieve 2.7% point greater margin in sales to DeCA than in the commercial sector. While it is aggressive to believe that DeCA could realize 100% of this 2.7% point differential across all national brand vendors, an additional 1.35% point margin is a realistic possibility. Sharing half of that amount with consumers yields a price decrease of 0.675%. These combined factors generate a margin of $27.8 million, as noted in Economic Assessment 3. Sales decrease $27.8 million on the same product volume and customer savings increases to 31.4% on the adjusted sales (to 32.4% on total sales) on the price decrease.

Once DeCA changes its business model to a for-profit variable pricing model, product variety is reduced as a result of the bidding process for shelf-space described

in Chapter 6. DeCA patrons will react to the reduction in product variety and national brand vendors will react to the increased price pressure. Both these reactions will impact DeCA sales, surcharge collection, customer savings rate, and potential margin.

	Option 3	
	Sales Impact	**Margin Impact**
Prices/Margin		
Price Change	$ (27,791,055)	$ (27,791,055)
Margin Change	$ -	$ 55,582,111
	$ (27,791,055)	$ 27,791,055
Patron Reaction		
To Price Changes	$ 19,643,321	$ 133,494
To Product Variety Changes	$ (80,561,226)	$ (547,484)
	$ (88,708,960)	$ 27,377,065
Business Partner Reaction		
Loss of Vendor Stocking Support	$ -	$ (43,861,984)
Change in Promotional Support	$ -	$ (104,740,595)
Customer Acceptance (of price change due to loss of promotional support)	$ 34,564,396	$ 34,564,396
	$ (54,144,564)	$ (86,661,118)
Incremental Costs	$ -	$ (1,000,000)
Net Impacts	**$ (54,144,564)**	**$ (87,661,118)**

Patron Reaction

Vendor competition for shelf space to obtain lower vendor prices to DeCA will reduce product variety within the commissaries by 16% from current levels, and will result in a product variety at DeCA which carries 30% fewer brands than commercial grocers. This is a significant gap. Patrons consider product assortment and variety as one of the factors in customer satisfaction and will react negatively to a further reduction from commercial norms. As a result of this decline in assortment, patrons will reduce their purchases from DeCA by nearly 2%, which will reduce sales by $81 million. This sales decrease reduces available margin by only $547,500 to a cumulative impact of $27.2 million, with no change to the savings rate.

In addition to the negative customer reaction from the change in product assortment, patrons will react positively to the price changes in Option 3. With a 0.675% price decrease, patrons will increase their purchases by 0.5% or $19.6

million. While this sales increase is significant, the low margin achieved contributes only $133,500 to available margin, leaving $27.4 million available.

Please see Appendix 1 for the detailed assessment of Patron Reactions.

Vendor Impacts – Vendor Stocking, Reset and Promotional Support

Even if DeCA passes on half of the profit generated back to consumers in the form of lower everyday shelf prices, the same cost impact applies to vendors in Option 3 as in Option 2 and as such, we expect all of the extra/surplus promotional support and vendor stocking support will erode. While some vendors will win in Option 2 and 3, the fact that DeCA is operating in a profit mode completely changes how vendors will view and support them.

The vendor reaction to Option 3 will result in increased cost to DeCA of $44 million to replace the level of vendor stocking and reset support currently received. Additionally, the current promotional surplus (2.6% of sales) that DeCA enjoys will erode if Option 2 is implemented. This loss of promotional funds equates to $104.7 million annually. We expect that one-third of the surplus promotional sales (33% of 2.6%) will be retained at the higher everyday price. In other words, a third of the customers will still need the item and therefore will make the purchase at the higher price. Thus, there will be an annual profit generated from these higher prices in the amount of $34.6 million, which reduces the customer savings rate to 30.8% on adjusted sales (to 32% on total sales).

The net impact, when all vendor reactions are considered, results in a $114 million margin loss, reducing the potential margin to $(86.6) million. DeCA will need to source this loss and absorb this cost (rather than pass on the additional cost to the customer) in order to maintain a 30% benefit.

Please see Appendix 2 – Vendor Impact Analysis for a detailed analysis of vendor reactions.

Capability Requirements

Implementing Option 3 will require the same enhancements to DeCA's category management and pricing capabilities as Option 2 requires. These requirements include:

- Expansion of DeCA's category management and space management group with an additional annual costs = $500,000.
- Supporting systems, technology and information resources for the expanded category management group. Additional annual costs = $350,000.
- Additional pricing staff to manage and maintain price systems where product cost does not equal customer price. Additional personnel costs = $150,000 annually.

Additional operating costs to support the expanded category management and price management capabilities = $1,000,000 annually, reducing the potential margin to $(87.6) million.

These requirements are detailed in Appendix 5 – DeCA Capabilities Assessment.

Conclusions

Option 3 results in a minimal decrease in the customer savings rate from 30.9% (excluding meat and produce) to 30.8% on adjusted sales (to 32% on total sales) and a negative margin, $(87,661,118), which does not support the Variable Pricing Objective, and which would require an annual appropriation increase. Since the economic analysis shows that Option 3 is not viable, no further assessment of qualitative and political considerations was performed. DeCA should not implement Option 3.

Chapter 8

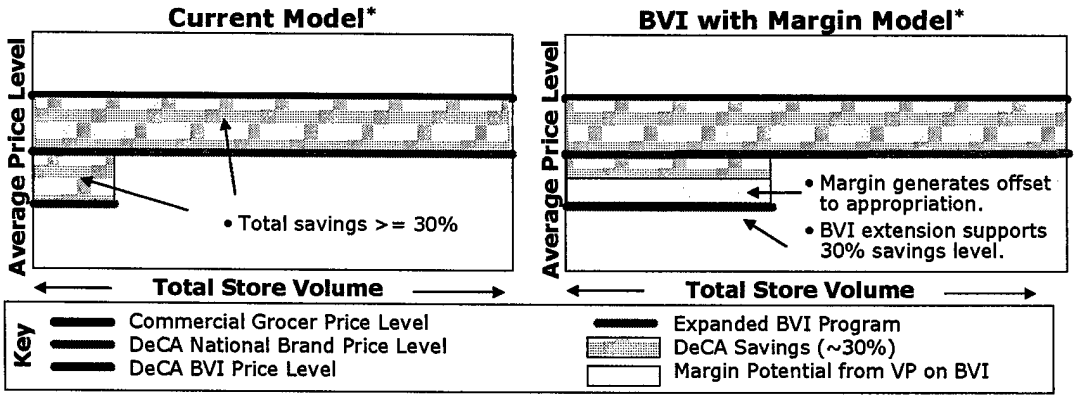
Option 4: Expand BVI Program and Use Variable Pricing to Attain a Margin

Overview

The final variable pricing option assessed involves an expansion of DeCA's Best Value Item (BVI) program, layered with a variable pricing component to generate a margin.

DeCA has offered a limited Best Value Item program since 2001, as an alternative to commercial industry private label programs. Best Value Items offer branded products at prices designed to offer a low cost alternative to top-tier nationally branded products, as well as alternatives to private label selections available in the commercial grocery sector. DeCA's BVI products are often priced below comparable private label products in commercial grocery stores. DeCA's BVI program currently encompasses fewer than 400 items, across 84 categories. The BVI program consists of many brands across the commissary. However, a brand may offer one or more SKUs for the BVI program; this does not mean that the brand is a BVI brand, just that certain SKUs have been identified as Best Value Items, a key difference that can potentially impact the quality associated with a brand or program.

BVI Expansion with Variable Pricing



Option 4 analyzes the impact of expanding the scope of the BVI program to be consistent with industry private label programs and managing the price gap to maximize margin but maintain the customer savings level (see table above). The price gap referred to above is the gap between the leading national brand price and the private label price within a category. Consumers expect a price gap in the range of 20% to 30% off leading national brand prices[11] and most retailers do not price private label products efficiently. That is, private label prices are most often not maximized for sales and profits, but are priced at gaps too large. [12]

Economic Assessment

Please refer to Economic Assessment 4 in Appendix 9 for the detailed economic analysis supporting this narrative.

	Option 4	
	Sales Impact	**Margin Impact**
Prices/Margin		
Product Mix Change	$ (220,042,162)	$ -
Price Change	$ 72,690,953	$ 72,690,953
Margin Change	$ -	$ -
	$ (147,351,209)	$ 72,690,953
Patron Reaction		
To Price Changes	$ -	$ -
To Product Variety Changes	$ -	$ -
	$ (147,351,209)	$ 72,690,953
Business Partner Reaction		
Loss of Vendor Stocking Support	$ -	$ (21,930,992)
Change in Promotional Support	$ -	$ (43,216,296)
Customer Acceptance (of price change due to loss of promotional support)	$ 14,261,378	$ 14,261,378
	$ (133,089,831)	$ 21,805,043
Incremental Operating Costs	$ -	$ (500,000)
Net Impacts	**$ (133,089,831)**	**$ 21,305,043**

[11] Store Brands and Category Management, Hock, Lodish, 1998.

[12] Dhar, Sanjay K., and Stephen J. Hoch, (1997), "Why Store Brand Penetration Varies by Retailer," Selected Paper 78, April 1997.

The analysis supporting an expanded BVI program first examined 2003 DeCA sales and excluded random weight perishables (meat and produce) and tobacco from further analysis, as these items would be excluded from an expanded BVI program. As a result, the baseline sales for Option 4 begin with 2003 sales of $4,117 million, and customer savings rate of 30.9%.

DeCA's current BVI program encompasses 1.9% of adjusted dollar sales (2.7% of unit sales). Within the commercial sector, Private Label programs comprise approximately 16% of a retailer's dollar sales (nearly 21% of unit sales).[13] However, in comparing DeCA's product categories to those of a traditional retailer, DeCA does not offer several categories where traditional retailers offer a private label alternative. As a result, this analysis has adjusted the 21% average private label program unit share to 19.9%, which is the appropriate size compared to commercial norms given DeCA's product category assortment.

In an analysis of DeCA's current BVI program, the customer savings on BVI brands over the same SKUs in the commercial sector is 32.1%. The same analysis indicates that DeCA's current price gap between BVI products and the leading national brand is 34.6%.

At 19.9% of DeCA unit sales, an expanded BVI program would grow $495 million over today's BVI program sales, reducing national brand sales by $715 million; total DeCA units do not change. BVI items are sold at a lower average price than national brand products resulting in lower sales dollars at DeCA. At this point, national brands comprise $3,324.3 million and BVI products comprise $572.8 million of DeCA sales.

The average national brand to private label price gap in the commercial sector is 26.3%, an 8.3 point lower gap as compared to DeCA's current price gap of 34.6% between BVI prices and national brand prices. Raising prices on BVI products by 12.7% will reduce the price gap between BVI products and national brands to 26.3%, and will increase sales and margin available by $72.7 million. Also note that increasing the price on BVI products reduces the savings rate on BVI products to 23.5%, but reduces the total DeCA customer savings rate to 31.2% only.

Patron Reaction

One could argue that a BVI program expansion will reduce product variety within the commissaries and impact customer loyalty and customer shopping behavior. However, a successful BVI program should not remove top-tier national brand products (products which influence customer loyalty and traffic) from the commissary, but rather replace second or third tier offerings with better value BVI products. As such, this analysis assumes that customer reaction to the expanded BVI program is minimal and does not impact sales or margin.

---

[13] Private Label Manufacturers Association, PLMA's 2003 Private Label Yearbook.

Vendor Impacts – Vendor Stocking, Reset and Promotional Support

Option 4 has different vendor dynamics than previous options. Because the variable pricing program and profit model only affect BVI items, we do not expect vendors will have the same level of reaction as in Options 1, 2 and 3. Expanding BVI SKUs to private label norms will have an impact on national brand shelf space and national brand sales. The reaction to DeCA growing the Best Value Item program to 19.9% of unit sales will result in national brand vendors cutting their vendor stocking support and extra promotional funds (2.6%) in half. Again, the driving force will be reduced sales, reduced vendor profits and the fact that DeCA is moving to a for-profit model.

The net impact, when all vendor reactions are considered, results in a $50.9 million margin loss, reducing the potential margin to $21.8 million.

Please see Appendix 2 – Vendor Impact Analysis for a detailed analysis of vendor reactions.

Capability Requirements

Implementing Option 4 will require additional capabilities to manage the expanded BVI program and the variable pricing requirements of this program. The economic impacts of these requirements include:

- Expansion of DeCA's category management and space management group with an additional annual costs = $200,000.
- Supporting systems, technology and information resources for the expanded category management group. Additional annual costs = $150,000.
- Additional pricing staff to manage and maintain price systems where product cost does not equal customer price. Additional personnel costs = $150,000 annually.

Additional operating costs to support the expanded category management and price management capabilities = $500,000 annually, reducing the potential margin to $21.3 million.

These requirements are detailed in Appendix 5 – DeCA Capabilities Assessment.

Conclusions

Option 4 results in a decrease in the customer savings rate to 31.0% and a positive margin, $21,305,043, which does not meet hurdle rate set out by the Variable Pricing Objective. Since the economic analysis shows that Option 4 is not viable, no further assessment of qualitative and political considerations was performed. DeCA should not implement Option 4.

♦ ♦ ♦

Supplemental Notes: Feasibility of BVI Expansion

Even though Option 4 is not feasible, we did perform an analysis of feasibility of BVI expansion in accordance with the Statement of Work. The results of that analysis are presented below.

Under Option 4, DeCA would expand their Best Value Item (BVI) program to match supermarket private label variety standards, and apply variable pricing on BVI items to narrow the current price gap versus leading national brands in each category, and in turn, generate gross profit dollars that offset appropriation funding.

Following is a description of the challenges, feasibility, and requirements associated with executing Option 4.

✓ ***Program Expansion*** – DeCA's current BVI program includes approximately 344 items. Since supermarket private label programs offer approximately 2,500+ items, reaching supermarket standards would require DeCA to procure an additional 2,100+ BVI items.

BVI Variety Needed to Match Supermarket Norms

Department	DeCA SKU Count Non-BVIs	DeCA SKU Count BVIs	DeCA BVI Share of SKUs	Supermarket SKU Count Nat Brands	Supermarket SKU Count Private Label	Supermarket Private Label Share of SKUs	DeCA vs. Supermarket BVI SKU Gap
Dry Grocery	10,913	147	1.3%	10,403	1,003	8.8%	856
Non-Edibles	3,142	66	2.1%	3,781	360	8.7%	294
HBC	3,057	42	1.4%	7,041	702	9.1%	660
Frozen	2,147	50	2.3%	2,008	199	9.0%	149
Dairy	1,315	20	1.5%	1,009	173	14.6%	153
Prepack Deli	756	11	1.4%	273	16	5.5%	5
General Merchandise	657	8	1.2%	1,617	70	4.1%	62
Total	21,987	344	1.5%	26,132	2,523	8.8%	2,179

Sources:
DeCA Data Warehouse
Willard Bishop Consulting Three-Chain Supermarket Database

Please see Appendix 11 for Category-level BVI variety requirements.

- BVI program expansion will require a significant investment of DeCA time and resources to identify/procure 2,100+ new BVI items.
- An expanded BVI program will have a strong impact on patron perceptions of DeCA's quality and variety. Consequently, DeCA may need to develop

and implement their own quality assurance program to ensure each BVI item meets DeCA and patron quality/taste expectations.

- An expansion of DeCA's BVI program will impact national brand product availability and shelf-space within the commissaries. It is expected that an expanded BVI program would necessitate the removal of 2100+ national brand products and 13.9% of DeCA shelf-space total, a increase of 11.3 points.

✓ ***Price Gap Management*** – DeCA currently sells BVI items at "cost", which results in a large average price gap versus leading national brands in each category.

Current BVI & Private Label Price Gaps

Current DeCA BVI-National Brand Price Gap	34.6%
Average Supermarket Private Label-National Brand Price Gap	26.3%
Difference	8.3%

Sources: Willard Bishop Consulting Three-Chain Supermarket Database; DeCA Data Warehouse 2004

- Consumers expect price gaps between private label and national brand items in the 20% to 30% range[14], and this corresponds to the actual private label versus national brand price gap in U.S. supermarkets today (26.3%)[15].

- However, current BVI-national brand price gaps average 34.6% at DeCA[16], a full 8.3 points greater than supermarket private label norms.

- Under Option 4, DeCA could narrow the BVI-national brand price gap to 26.3% (supermarket norms) for the newly expanded BVI offering, i.e., increase prices by 8.3 points and apply the newly generated profit to offset appropriation funding.

---

[14] Hoch, Stephen J., and Leonard M. Lodish (1998), "Store Brands and Category Management," Wharton School, University of Pennsylvania, March 1998.

[15] Willard Bishop Consulting: Three-Chain Supermarket Database.

[16] DeCA Data Warehouse, 2004.

Some studies have suggested that the average national brand to private label price gap (26.3%) could be further narrowed to as little as 15%. While a 20% or 15% private label vs. national brand price gap is appropriate in some supermarket categories, it is not an appropriate solution in all categories, and is unlikely to produce such a positive increase in margin dollars at DeCA if applied across the store.

- ✓ It is not a wide enough gap to drive sales and share of private label/BVI items in all categories. Many categories need a larger gap to effectively differentiate the private label item from its branded counterparts, and attract purchases.

- ✓ It is not a wide enough gap to drive sales and share for "non-store-branded" BVI items (marketed under a wide variety of labels) that do not have all the sales-enhancing advantages of supermarket private label items (see page 41), and cannot be expected to produce sales/share equal to supermarket private label norms at price gaps that are lower than supermarket private label norms.

- ✓ It is smaller than what consumers expect, i.e., consumers expect private label vs. national brand price gaps in the 20% - 30% range.[17]

Accordingly, we have concluded that the raising prices to the 26.3% price gap level is the *best* outcome that DeCA could accomplish in this option – and as noted herein, may be difficult for DeCA to achieve.

- ✓ ***Program Challenges*** – DeCA would likely face several key challenges associated with: expanding their BVI program to supermarket norms, encouraging patrons to purchase BVI products at supermarket private label rates (19.9% of units purchased)[18], and applying variable pricing to BVI items.

  - ➢ ***Procurement*** – DeCA would have to proactively identify/source over 2,100 new BVI items. DeCA may also have to discontinue up to 2,100 current items to make room for new BVI products.

  - ➢ ***Pricing*** - Managing the BVI - national brand price gap under Option 4 will be extremely difficult since DeCA will control only BVI prices. Since national brand suppliers will continue to control prices for their items, DeCA will need to continuously analyze national brand price levels, and adjust BVI

---

[17] Hoch, Stephen J., and Leonard M. Lodish, "Store Brands and Category Management", Wharton School, University of Pennsylvania, March 1998.

[18] Willard Bishop Consulting: Three-Chain Supermarket Database.

prices frequently to ensure the standard BVI to national brand average price gap remains at 26.3%. .

Sales – Once DeCA expands their BVI offering by over 2,100 items, they will face several sales-building challenges to reach average supermarket private label category share (19.9% of units).

- *Quality Perception* – Without a consistent brand name—as enjoyed by supermarket private label programs—DeCA patrons may question BVI quality. According to Dhar, Hoch (1997), a consistent retailer brand name reduces consumer risk associated with trying new private label products with unknown manufacturer origins[19].

- *Promotional Support* – Commercial supermarket operators typically invest their own funds to promote their private label brands. To capture similar category share, DeCA may need to invest in promoting their BVI program, even if BVI vendors are not offering promotional support. Please note that any promotional activity by DeCA violates Armed Services Commissary Regulation as detailed in paragraph 4-801: Statement of Policy (DoD 1330.17-R (ASCR)). Please see Appendix 7 for additional details on Legislative Considerations.

- *Supermarket Success Factors* – Dhar, Hoch (1997) identify several factors driving supermarket private label success, that may not be available to DeCA's BVI program[20].

    - Premium private label – Offering a line of "premium" private label items—in addition to the full line of mainstream private label products—increases mainstream private label category share by 2.5 points.

    - Quality assurance program – Maintaining a private label quality assurance program increases private label category share by 2.3 points.

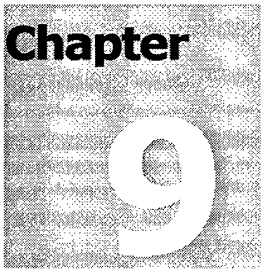
    - Own brand name – Retailers that place their own company/store name on private label items increase private label category share by 2.1 points.

---

[19] Dhar, Sanjay K., and Stephen J. Hoch (1997), "Why Store Brand Penetration Varies by Retailer," Selected Paper 78, April 1997.

[20] Ibid.

- EDLP pricing – Retailers operating an EDLP or EDLP Plus pricing strategy increase private label category share by 1.4 points.



Conclusions

The economic analysis of each variable pricing option detailed in Chapters 5 through 8 of this report shows that variable pricing is not a feasible means for DeCA to reduce the appropriated funds required while maintaining a 30% customer savings rate.

Variable pricing would require DeCA to change its business model from that of selling goods at cost (plus the 5% surcharge) to a model where goods are sold at cost plus a (variable) margin. Because there is no margin in the DeCA system today, any variable pricing approach would need to source margin from either patrons (lowering the savings rate) or national brand vendors (reducing product costs to DeCA).

The reactions from patrons and vendors due to any combination of variable pricing actions are quantifiable with a high confidence. While a positive or negative reaction from patrons to any variable pricing initiative can potentially cause a swing in customer loyalty, traffic and shopping behavior at DeCA, patron reactions create a relatively minor impact on margin available to offset the appropriation.

The negative economics of all variable pricing options considered rest on the vendor reaction to DeCA's move to a variable pricing system. Today, vendors enjoy significant benefits in being a business partner to DeCA – higher margins, greater share and access to a desirable customer demographic. In return for these benefits, national brand vendors provide DeCA with greater levels of support than is given to commercial grocers, in the form of shelf-stocking, reset support and additional promotional funds. Our research and analysis indicates that DeCA will lose in most cases all of these benefits with a shift to a variable pricing model. As these vendor support components contribute to DeCA's operations and product costs, a loss of any or all of these affects DeCA's cost position, which directly impacts variable pricing's ability to create a margin available to lower appropriated fund costs.

In most variable pricing scenarios, quantifiable offsets due to projected patron and/or vendor reactions, plus ongoing operating costs, lead to a negative financial result in the form of a negative margin which would require an appropriation increase. Only one of the four variable pricing scenarios generates a positive financial result, however the level is considered too small to overcome potential risks any variable pricing implementation would face.

We have also tested the sensitivity of our key assumptions in each option, and combinations of options, to determine whether there would be any impact on the study conclusions. These sensitivity tests are summarized in Appendix 6. They did not lead to any change in, or alter our confidence in, our overall conclusions.

Based on our economic analysis, we can also conclude that DeCA's current pricing model is the most efficient method to maximize and transfer vendor support directly to DeCA patron savings. Assessment of DeCA's operational efficiency was not included in the scope of our work.

Accordingly:

- DeCA should not implement variable pricing.
- A demonstration project is not required, since variable pricing will not be implemented.
- No legislative change will be required.

Appendices

Appendix 1: Patron Reactions

Option 1: Variable Pricing to Reduce Savings Rate from 32.1% to 30.0%

Economic modeling illustrates that the most DeCA's current prices can increase—while maintaining a 30.0% savings rate versus commercial food retailers—is 2.2%. And, as prices increase, DeCA can expect a corresponding impact on patron spending and margin/profit generated at the commissary. Following is a description of the extent of this expected impact.

✓ ***Levels of Impact*** – The expected patron reaction can be measured at three levels:

- **Unit Sales** – DeCA price increases will cause patrons to reduce the number of items purchased at the commissary, i.e., decrease unit sales.

- **Dollar Sales** – Reducing unit sales will have a corresponding impact on DeCA's dollar sales, taking into account that while unit sales are lower, each unit will now be sold at a higher price than before.

- **Margin Dollars** – Changes in unit or dollar sales do not directly impact the economic feasibility of variable pricing options. Instead, price-related changes to both unit and dollar sales drive increases or decreases in gross margin dollars that directly impact commissary appropriation funding. Consequently, while a price increase may cause a substantial impact on patron purchases/spending, the "net", quantifiable patron impact on the economic feasibility of each variable pricing option is the change in gross margin dollars corresponding to the change in patron spending, i.e., approximately 2.2% of the dollar sales impact.

✓ ***Patron Sales Impact: Five Alternatives*** – Analyses of academic research, IRI/DeCA data, and DeCA consumer studies yield several possible estimates of the patron sales impact associated with a 2.2% DeCA price increase. And, as stated above, the unit and dollar sales impact drives a change in margin dollars that increase or decrease funds available to offset appropriated funding. Following is a summary of five estimates of the sales impact associated with a 2.2% price increase, and a rationale for selecting the most appropriate estimate to include in the economic analyses.

Potential Sales Impact Associated with a 2.2% Price Increase: Five Alternatives

	Alternative 1: Minimal Impact	Alternative 2: Low Impact	Alternative 3: Stock-Up Impact	Alternative 4: Conservative Projection	Alternative 5: Full Projection
Unit Sales Impact	-0.66%	-0.92%	-2.65%	-3.74%	-7.52%
Rationale	Supermarket study finding: For each 10% increase in price, unit sales decrease by 3%. No variation by extent of price change. No promotion of price change.	DeCA analysis finding/projection: 2.4% average price increase reduces DeCA unit sales by 1.0%. No promotion of price change.	Supermarket study finding: Price increases of 20% on stock-up items reduce unit sales by 54.95%. No promotion of price change.	ACSI patron projection: 2% increase in DeCA prices will reduce traffic by 3.4% (2002/2003 average). Assumes patron awareness of price changes. Selected alternative for economic analyses.	ACSI patron projection: 5% increase in DeCA prices will reduce traffic by 17.1% (2002/2003 average). Assumes patron awareness of price changes.
Dollar Sales Impact	1.53%	1.26%	-0.51%	-1.62%	-5.49%
Source	Hoch, Dreze, Purk, Journal of Marketing, April 1994	IRI, 99-Week DeCA Price Change Database, 2003	Litvack, Calantone, Warshaw, Journal of Retailing, Fall 1985	ACSI Special Segment Questionnaire, 2002 & 2003	ACSI Special Segment Questionnaire, 2002 & 2003

- **Alternative 1: Minimal Impact** – The most conservative/minimal estimate of the patron sales impact associated with a 2.2% DeCA price increase can be extrapolated from Hoch, Dreze, Purk (Journal of Marketing, 1994)[21]. In a study of supermarket price changes, they found that "all things being equal", for each 10% increase in price, unit sales decrease by 3%.

  - This projects to a 2.2% price increase causing a 0.66% decrease in unit sales, and 1.53% increase in dollar sales. Since the unit sales impact is so small, the price increase in this scenario increases dollar sales.

  - This alternative is not likely to occur with a DeCA price increase since it is the outcome of unannounced supermarket price changes, while a price increase at DeCA—associated with a new variable pricing strategy—would likely be publicly known by patrons.

- **Alternative 2: Low Impact** – Another "low" estimate of the patron sales impact from a 2.2% DeCA price increase comes from an analysis of IRI/DeCA historical data[22]. Over a 99-week period ending in February 2003, DeCA price increases between 2%-3% (average 2.4%) generated a unit sales loss of approximately 1%.

---

[21] Hoch, Stephen J., Xavier Dreze, Mary E. Purk (1994), "EDLP, Hi-Lo, and Margin Arithmetic," Journal of Marketing, April 1994.

[22] Information Resources Inc., and DeCA Data Warehouse, Price/Volume Changes, 99-Weeks, April 2001 – February 2003.

- This projects to a 2.2% price increase causing a 0.92% decrease in unit sales, and 1.26% increase in dollar sales.

- The sales impact of the price changes was relatively light. These price changes were not announced/promoted, and were likely viewed as ordinary price adjustments patrons would expect both at DeCA and commercial grocers. However, DeCA price changes associated with a new variable pricing strategy would be publicly known by patrons, and would likely have a much greater impact on sales.

➢ **Alternative 3: Stock-Up Impact –** Another academic study (Litvack, Calantone, Warshaw, Journal of Retailing 1985) identified the sales impact associated with raising prices of items defined as "stock-up" or frequently consumed goods[23].

- This study gets us closer to an appropriate impact estimate for DeCA since it focuses on stock-up shopping, i.e., the type of shopping most likely associated with DeCA shopping trips. Analyses of DeCA and commercial grocer average transaction size data determines that consumers shopping the commissary are much more likely to be on "stock up" trips than consumers shopping a commercial supermarket.

  - The average transaction size at a large, Class V commissary is approximately $54.39[24], while the average transaction size at a commercial supermarket is approximately $24.63 [25].

  - DeCA transactions are an average of 120% higher than commercial transactions.

- According to Litvack, Calantone, Warshaw (1985), a 20% increase in prices of stock-up goods reduces unit sales on these items by 54.95%. This projects to a 2.2% price increase causing a 2.65% decrease in unit sales, and a corresponding 0.51% decrease in dollar sales.

- However, even this alternative does not take all expected factors into account, e.g., it is the result of unannounced supermarket price changes,

---

[23] Litvack, David S., Roger J. Calantone, Paul R. Warshaw (1985), "An Examination of Short-Term Retail Grocery Price Effects," Journal of Retailing, Fall 1985.

[24] DeCA Data Warehouse.

[25] Food Marketing Institute, Supermarket Facts: Industry Overview 2002, at www.fmi.org.

while a price increase at DeCA—associated with a new variable pricing strategy—would likely be publicly known by patrons.

- **Alternative 4: Conservative Projection** – A conservative, realistic estimate of the DeCA sales impact from a price increase can be gleaned from DeCA-commissioned patron/consumer research (ACSI – American Customer Satisfaction Index) conducted by the Claes Fornell International (CFI) Group and the University of Michigan Business School[26].

    - The ACSI questionnaires ask a sample of DeCA patrons what they would do—all things being equal—if the commissary raises its prices, e.g., how much could the commissary raise its prices before they would definitely not choose the commissary for their next shopping trip?

    - Looking across the last two ACSI studies (2002 and 2003), a 2% increase in price would result in an average of a 3.4% reduction in commissary traffic. This projects to a 2.2% price increase causing a 3.74% decrease in unit sales, and a 1.62% decrease in dollar sales.

    - Given that these results come directly from DeCA patrons, and assume patron awareness of price changes, it has been selected as the most reasonable, representative, and realistic estimate of the sales impact associated with a DeCA price increase, and is the impact factor included in the economic feasibility analysis of Option 1.

- **Alternative 5: Full Projection** – DeCA's ACSI studies also provide a less conservative estimate of the patron sales impact associated with a commissary price increase.

    - ACSI 2002 and 2003 results highlight the impact of larger increases in commissary prices, and indicate that a 5% increase in DeCA prices would result in a 17.1% decrease in commissary traffic. This projects to a 2.2% price increase causing a 7.52% decrease in unit sales, and a 5.49% decrease in dollar sales.

    - However, since this projection is based on a price increase much greater than that considered in Option 1, we have deferred to Alternative 4 as a more conservative estimate to include in the economic analyses of Option 1.

---

[26] ACSI Special Segment Questionnaire/Study (2002 and 2003), Claes Fornell International Group and the University of Michigan Business School.

✓ ***Factors Driving High Patron Price Sensitivity*** – The DeCA patron appears more price-sensitive than the average shopper. Consequently, price impact information, insights, and data focused on commercial grocers most likely underestimates the impact of a commissary price increase on patron purchases/spending. Following are key factors that would be expected to drive high patron price sensitivity to a price increase associated with implementing a variable pricing strategy at the commissary.

➢ **Change in Benefit** – Commissary patrons across all ranks and demographics strongly value their commissary benefit[27]. In fact, it is often referred to as their most important non-healthcare benefit. Consequently, DeCA patrons would be immediately aware of—and highly sensitive to—price increases associated with a shift to a variable pricing strategy. Interviews with Military Associations and DeCA staff provide anecdotal indication that many patrons are somewhat distrustful that DeCA currently sells products at actual cost (plus a 5% surcharge), and would likely be suspicious that their benefit savings rate would be maintained under variable pricing.

➢ **Price Awareness** – DeCA patrons appear highly aware of food prices both "inside" and "outside" the gate, i.e., at the commissary and commercial food stores, due to several reasons:

- *Income* – Nearly one-quarter of active duty military personnel (E1-E3) earn an annual income (including housing allowances) averaging only $22,036[28]. Additionally, over one-half of eligible shoppers are military retirees[29], many of whom are likely on relatively fixed incomes. In general, lower income consumers are more price sensitive than higher income consumers[30].

- *Heavy Cross-Shopping* – DeCA patrons are also strongly aware of prices at commercial food stores since virtually all shop these outlets regularly. The average military household shops a commercial supermarket approximately 83 times a year, i.e., 1.6 times per week.[31]. And, "prices

---

[27] Defense Commissary Patron Survey (2000), Market Facts, February 2000.

[28] Department of Defense Data – supplied by DeCA (2004).

[29] Military Grocer 2003 Commissary Fact Book, September 2002.

[30] Jones, Eugene (1997), "An Analysis of Consumer Food Shopping Behavior Using Supermarket Scanner Data: Differences by Income and Location," American Journal of Agricultural Economics, December 1997.

[31] Kraft Foods, Military Business Topline Analysis 1996, based on Nielsen Household Panel Data, 52 Weeks ending 6/2/96.

are the most important differentiator between commissaries and supermarkets"[32]. Additionally, while shopping commercial retailers, DeCA patrons are exposed to exceptionally low "loss-leader" prices (items sold by a commercial retailer below cost to drive store traffic), and can often take advantage of special savings from retailer-funded "Double-Coupon" and "Triple-Coupon" policies allowing shoppers to redeem coupon values in excess of their face-value.

- **Supercenter Expansion** – The supercenter format currently accounts for approximately 12% of the U.S. retail food industry, and its share is growing [33].

  - 44% of U.S. commissaries are located within 5 miles of a Wal-Mart Supercenter[34],[35].

  - Willard Bishop Consulting retail pricing analyses and Banc of America Securities Equity Research find that commercial supermarket prices are approximately 13-18% higher than supercenter prices [36],[37]. Consequently, the DeCA patron savings versus supercenters is much lower than the 30.0% average benefit; DeCA patron savings is closer to a 15% average benefit over supercenters.

  - As Wal-Mart Supercenters and other supercenter retailers continue to grow, they will serve as a strong competitor for patron spending, and will likely enhance patron price sensitivity when shopping the commissary.

- **Location/Convenience** – DeCA patrons believe they need to trade-off location and convenience when shopping the commissary in favor of low prices. Any increase in prices will likely shift patron spending to more convenient commercial grocers.

---

[32] Defense Commissary Patron Survey (2000), Market Facts, February 2000.

[33] Willard Bishop Consulting, 2003 Store Format Report.

[34] Military Grocer 2004 Commissary Fact Book, September 2003.

[35] Wal-Mart Store Finder, www.walmart.com.

[36] Willard Bishop Consulting Retail Pricing Analyses.

[37] Banc of America Securities Equity Research, "Is the Price Right? Quarterly BAS Seven Market Pricing Study: Second Quarter of 2003," August 2003.

- "Inconvenient location" is a top reason why eligible patrons do not shop the commissary more often [38], [39].

- The commissary is a less convenient shopping option versus commercial supermarkets due to 1) its location on base (not necessarily near where patrons live); 2) security delays associated with entering the base; and 3) the commissary's limited hours of operation. Additionally, many patrons resent DeCA's crowds/long lines, tipping baggers, and the lack of "extended" customer service options that are commonly available at commercial supermarkets [40].

➢ **Variety** – Another factor impacting DeCA patrons high price sensitivity at the commissary is the commissary's variety image/position which forces patrons to make variety trade-offs when shopping the commissary, and/or make extra shopping trips to commercial supermarkets.

- *Assortment* – DeCA assortment is not as extensive as that supplied by the average commercial supermarket. For example:

  - The average commercial supermarket offers 14 brands per category versus 12 brands at the commissary [41], [42].

  - There are entire categories DeCA is not authorized to offer within the commissary that are available at commercial supermarkets.

- *Out-of-Stocks* – DeCA patrons also find out-of-stock levels are often higher than what they experience at some commercial supermarkets, likely due in part to DeCA's vendor-stocking policies[43]...another required trade-off.

---

[38] Frito-Lay, Inc., "Understanding the Commissary Shopper", Qualitative Research Conducted by Elrick & Lavidge, May 1997.

[39] DeCA, "Military Commissary Study", Consumer Link 1998.

[40] American Logistics Association, "Focus Group Learnings: Reasons for Use and Non-Use of Commissaries and Exchanges," conducted by Willard Bishop Consulting, June 1995.

[41] Willard Bishop Consulting, Three-Chain Supermarket Database.

[42] DeCA Data Warehouse.

[43] American Logistics Association, "Focus Group Learnings: Reasons for Use and Non-Use of Commissaries and Exchanges," conducted by Willard Bishop Consulting, June 1995.

- *Speed-to-Shelf* – DeCA patrons feel that commercial grocers bring new products to market more quickly than DeCA; another trade-off they have to make when shopping the commissary [44].

➢ **Produce** – DeCA's produce department image is lower than patron's image of produce departments at commercial supermarkets[45], requiring patrons to trade-off produce quality and availability for lower prices at the commissary.

---

[44] Frito-Lay, Inc., "Understanding the Commissary Shopper", Qualitative Research conducted by Elrick & Lavidge, May 1997.

[45] AC Nielsen 2002, www.militarymarket.com.

Option 2: Reduce Product Acquisition Cost but Maintain Current Customer Price Levels

Under Option 2, forcing grocery suppliers to compete for shelf space—and provide cost concessions to retain/grow current space allocation—will reduce the number of suppliers/brands available in most categories; a key driver of consumer variety image. Since DeCA variety is already more limited than the variety in an average commercial supermarket, reducing DeCA variety further will likely have an negative impact on patron purchases/spending at the commissary.

Impact of Variety Reduction

Department	Avg. # of Brands Per Category (DeCA)[1]	Avg. # of Brands Per Category (Supermarket)[2]
Dry Grocery	16	20
Frozen	14	14
HBC	13	23
Prepack Deli	12	6
Dairy	9	9
Non-Edibles	8	14
Total Store (Current)	12.0	14.2
Total Store (Option 2)	10.0	
Wtd.Percent Change (Current vs. Option 2)	16.1%	
Supermarket Brand Advantage (Current)	16%	
Supermarket Brand Advantage (Option 2)	30%	

Calculation: Sales Impact of Variety Reduction	
Wtd.Percent Change (Current vs. Option 2)	16.1%
Minimal Unit Sales Impact of 1% Price Increase [3]	-0.3%
Minimal Unit Sales Impact of 16.1% Price Increase	-4.8%
Minimal Dollar Sales Impact of 16.1% Price Increase	-2.7%
Store Selection Importance Index (Variety vs. Price)[4]	72
Sales Impact	-1.97%

Sources:

1. DeCA Data Warehouse
2. Willard Bishop Consulting Three-Chain Supermarket Database
3. Hoch, Stephen J., Xavier Dreze, Mary E. Purk (1994), "EDLP, Hi-Lo, and Margin Arithmetic," Journal of Marketing, April 1994.
4. DeCA, "Military Commissary Study", Consumer Link 1998.

Patron analyses estimate that reducing DeCA variety under Option 2 will decrease DeCA dollar sales by 1.97%.

- ✓ ***Variety*** – According to analyses of current DeCA variety and the variety offered by commercial supermarket operators, it appears that commercial supermarkets offer two more brands per average category compared to the commissary (14 brands at a commercial supermarket versus 12 brands at a Class V commissary), i.e., 16% more brands/variety at the supermarket.

- ✓ ***Option 2 Adjustment*** – Under Option 2, we conservatively estimate that competition among vendors will reduce the number of brands at the commissary by an average of two brands per category, i.e., from 12 per category to 10 per category. The category-weighted impact of this adjustment is 16.1% fewer brands than before. And, under this new scenario, commercial supermarkets will now offer 30% more brands than the commissary.

- ✓ ***Sales Impact Calculation*** – The sales impact of variety adjustments made at "average" supermarkets varies widely based on such factors as variety level/image before the adjustment, degree of "clutter" on the shelves and in the aisles, and variety offered by competing supermarkets in the area. Given that the commissary is a unique retail format, we have estimated the variety impact of a reduction in variety based on the attitudes and responses of DeCA patrons as captured in DeCA patron research.

  - ➢ **Premise –** The premise driving the variety impact estimate is that according to DeCA Consumer Link patron research, variety and price are both strong drivers of store choice for DeCA patrons, and that variety alone has 72% of the influence on store choice, as price does.[46] Consequently, the expected dollar sales impact of adjustments in variety will have 72% the weight of the expected dollar sales impact of a similar-size adjustment in price.

  - ➢ **Price-Based Sales Impact** – According to Hoch, Dreze, Purk (1994)[47], a 10% price increase will decrease unit sales by 3% (low, conservative impact estimate).

    - Consequently, a 16.1% price increase would decrease unit sales by 4.8% and would decrease dollar sales by 2.7%.

---

[46] DeCA, "Military Commissary Study", Consumer Link 1998.

[47] Hoch, Stephen J., Xavier Dreze, Mary E. Purk (1994), "EDLP, Hi-Lo, and Margin Arithmetic," Journal of Marketing, April 1994.

- Given that variety has 72% of the influence on store choice as price, a variety-based sales impact will have approximately 72% the weight as a similar-size price impact. As a result, a 2.7% price-based dollar sales impact equates to a 1.97% variety-based impact on dollar sales.

- Anecdotal support for the 1.97% impact estimate is found by examining the impact of similar reductions in variety at Dominick's Finer Foods (a 100+ store supermarket chain in the Chicago market) upon acquisition by Safeway, which contributed to a sales/share loss of 5%-6% between 2000 and 2002 [48].

[48] 2002 Market Scope/2003 Market Scope, Trade Dimensions International, Inc.

Option 3: Reduce Product Acquisition Cost and Split Savings Achieved with Customers

In Option 3, DeCA would force grocery suppliers to compete for shelf space, thereby reducing both the number of suppliers/brands available in most categories and DeCA product acquisition costs. This option differs from Option 2 by sharing these savings with DeCA patrons in the form of reduced prices.

- ✓ ***Price Reduction*** – Under Option 3, DeCA can earn a 1.35% cost reduction from vendors through stronger negotiation and competition for shelf space, half of which (0.675%) would be shared with patrons through lower prices.

- ✓ ***Sales Impact Calculation*** – Analyses of academic research and DeCA consumer studies yield two possible estimates of the patron sales impact associated with a 0.675% DeCA price decrease. Following is a summary of the two estimates and a rationale for selecting the most appropriate one to include in the Option 3 economic analysis.

Sales Impact of DeCA Price Reduction

	Alternative 1: Minimal	Alternative 2: Full Projection
Price Reduction	0.675%	0.675%
Unit Sales Impact	0.20%	1.17%
Rationale	Supermarket study finding: For each 10% decrease in price, unit sales increase by 3%. No variation by extent of price change. No promotion of price change.	ACSI patron projection: 5% decrease in DeCA prices will increase traffic by 8.65% (2002/2003 average). Assumes patron awareness of price changes. Selected alternative for economic analyses.
	Unit Impact 10% price decrease 3.00% 1% price decrease 0.30% 0.675% price decrease 0.20%	Unit Impact 5% price decrease 8.65% 1% price decrease 1.73% 0.675% price decrease 1.17%
Dollar Sales Impact	-0.48%	0.49%
Source	Hoch, Dreze, Purk, Journal of Marketing, 1994	ACSI Special Segment Questionnaire, 2002 & 2003

- ➢ **Alternative 1: Minimal Impact** – The most conservative/minimal estimate of the patron sales impact associated with a 0.675%% DeCA price decrease can be

extrapolated from Hoch, Dreze, Purk (Journal of Marketing, 1994)[49]. In a study of supermarket price changes, they found that "all things being equal", for each 10% decrease in price, unit sales increase by 3%.

- This projects to a 0.675% price decrease causing a 0.20% increase in unit sales and 0.48% decrease in dollar sales.

- This alternative is not likely to occur with a DeCA price reduction since it is the outcome of unannounced supermarket price changes, while a price reduction at DeCA—associated with an Option 3 variable pricing strategy—would likely be publicly known by patrons.

➢ **Alternative 2: Full Projection –** A realistic estimate of the DeCA sales impact from a price reduction can be gleaned from DeCA-commissioned patron/consumer research (ACSI – American Customer Satisfaction Index) conducted by the Claes Fornell International (CFI) Group and the University of Michigan Business School[50].

- The ACSI questionnaires ask a sample of DeCA patrons with a low/moderate inclination to shop the commissary what they would do—all things being equal—if the commissary reduced its prices, e.g., how much would the commissary need to lower their prices before they would definitely choose the commissary for their next shopping trip?

- Looking across the last two ACSI studies (2002 and 2003), a 5% reduction in price would result in an average of a 8.65% increase in commissary traffic. This projects to a 0.675% price reduction causing a 1.17% increase in unit sales, and a 0.49% increase in dollar sales.

- Given that these results come directly from DeCA patrons, and assume patron awareness of price changes, it has been selected as the most reasonable, representative, and realistic estimate of the sales impact associated with a DeCA price reduction, and is the impact factor included in the economic feasibility analysis of Option 3.

---

[49] Hoch, Stephen J., Xavier Dreze, Mary E. Purk (1994), "EDLP, Hi-Lo, and Margin Arithmetic," Journal of Marketing, April 1994.

[50] ACSI Special Segment Questionnaire/Study (2002 and 2003), Claes Fornell International Group and the University of Michigan Business School.

Appendix 2: Vendor Impact Analysis

Overview

Understanding how variable pricing can generate a surplus to offset appropriated DeCA funds cannot be made in isolation. There are many factors that have to be considered beyond the profit implications. Variable pricing changes who DeCA is, how they operate, and how vendor partners will provide support. In a variable pricing environment, DeCA will operate much closer to the way commercial supermarkets operate today. This change is not an incremental change but rather a significant and systematic change and the corresponding impact on operations cannot be understated.

In order to better understand how national brand vendors will likely respond to DeCA operating commissaries for profit, several questions need to be addressed.

- ✓ How strong are vendor reactions?
- ✓ What does it cost vendors to serve DeCA today; how does this cost compare to supermarkets and what are the cost implications to supporting a profit model?

Vendors consistently ranked 100% promotional pass-through, the exceptionally high share of category sales that they enjoy today (often 30% to 50% greater than their share in the supermarket channel) and the ability to build strong brand equity at an early age as the primary benefits of being a DeCA supplier. These benefits to national brand vendors provide the rationale as to why national brands provide DeCA with a greater level of support than they provide to commercial grocers (please see Cost-to-Serve Analysis in Appendix 10 for additional details). Vendors see all three benefits at significant risk under a profit model. They understand variable pricing and all of the incremental costs that come with managing a profit model and quickly see these incremental costs eroding their profitability within the DeCA channel.

In interviews conducted with eight vendors for this assessment, all were able to visualize and articulate how a change to variable pricing could impact their support and the following comments summarize vendor feelings.

- ✓ "Why would national brands absorb the same level of (vendor support and promotional) cost if DeCA is achieving a markup." – National Brand Vendor
- ✓ "I would have trouble gaining the same level of support within our company if DeCA's model changed." – National Brand Vendor
- ✓ "We may not be able to continue to service DeCA at the same level." – National Brand Vendor
- ✓ "How would they do it? Wal-Mart is the only retailer that understands variable pricing." – National Brand Vendor

It was clear from the interviews conducted with national brand vendors that they would react negatively to DeCA if variable pricing was implemented and we believe that a significant amount of financial support currently provided by national brand vendors would dissolve.

Hyper-competition, the growth of Wal-Mart and the poor economy have eliminated many profitable segments of vendor businesses. The Wal-Mart growth phenomenon alone has taken the value and profit out of many businesses including the vendors who are subject to a continued pressure to reduce costs. This has had a ripple affect across the grocery industry.

A decade ago, vendors typically found ways to pay for additional retailer requests - for monies to support new promotional programs, category management programs, retail implementation programs and other programs retailers created but looked to vendors to provide nearly 100% of the financial support. Today, these requests typically are met with a response directing any additional support to come out of existing market development/promotional funds that the retailer currently receives from the vendor. Vendors are operating more and more in a zero-sum environment; additional spending requests in one area are at the expense of budgeted spending in another area. This is an important factor and why we expect vendors will respond quickly if DeCA moves to a for-profit model.

Vendor Profitability Analysis

To understand how much support is at risk, it's important to look at vendor cost-to-serve and internal vendor profitability. The starting point is determining the cost and profit vendors generate in the commercial supermarket channel. A recent cost-to-serve and channel profitability study completed by Willard Bishop Consulting for the Food Marketing Institute (FMI) and the Grocery Manufacturers of America (GMA) associations determined that national brand vendors generate, on average, a 13.7% contribution to profit in the supermarket channel. This figure is based on cost of goods averaging 52.5% of sales and all other retailer/customer-related expenses averaging 33.8% of sales.

Retail Grocery Contribution to Profit for National Brands

	Supermarket
Sales	**100.0%**
Less COGS	-52.5%
Gross Profit	**47.5%**
Less Discounts & Allowances	-4.5%
Less Distribution	-3.7%
Less Trade & Consumer Spending	-15.8%
Less Sales & Marketing Expenses	-8.3%
Less Other Costs of Doing Business	-1.5%
Contribution to Profit	**13.7%**

Please see Cost-to-Serve Analysis in Appendix 10 for details for each component of the contribution to profit analysis.

The study results were developed with direct and close support from 12 national brand vendors which represents the largest database of cost-to-serve information in the industry.

How does DeCA compare? Starting with cost of goods sold, DeCA has a 6.3% buying advantage over commercial supermarkets. This means DeCA is buying the same goods for 6.3% less than retailers like Kroger, Safeway, Albertsons and Giant Foods. This figure was determined by matching, SKU-by-SKU, the cost DeCA pays today for 18,000 + items to what three representative supermarket chains are paying for those same 18,000 + items today.

DeCA vs. Commercial Retail – Contribution to Profit for National Brands

	Supermarket	DeCA	Difference
Sales	**100.0%**	**100.0%**	
Less COGS	-52.5%	-58.8%	
Gross Profit	**47.5%**	**41.2%**	**-6.3%**
Less Discounts & Allowances	-4.5%	-0.1%	
Less Distribution	-3.7%	-3.5%	
Less Trade & Consumer Spending	-15.8%	-17.9%	
Less Sales & Marketing Expenses	-8.3%	-3.1%	
Less Other Costs of Doing Business	-1.5%	-0.2%	
Sub-total	-33.8%	-24.8%	
Contribution to Profit	**13.7%**	**16.4%**	**2.7%**

Next, we looked at all of the Discounts and Allowances DeCA receives. Since DeCA is guaranteed the best bracket prices that include all typical cash discounts generally offered to supermarkets for prompt payment, the DeCA discount and allowance figure is only 0.1%. All discounts and allowances are already in the cost of goods, which explains much of the 6.3% difference. DeCA receives a small amount of cash discounts (0.1%) that are not already factored into the cost of goods.

The Distribution cost to deliver product to DeCA distributors is slightly lower than the cost to commercial supermarkets. The difference is due directly to DeCA's volume efficiencies. The drayage fee that vendors pay for wholesale distribution is already included into the DeCA cost of goods.

Third, Consumer and Trade Spending was analyzed. This line item includes promotional support, slotting fees, sponsorships and events, and consumer advertising.

Vendors don't experience slotting fees for DeCA and there are minimal event costs. However, vendors provide 2.6% more promotional funding to DeCA than a typical supermarket. This figure was determined by comparing 52 weeks of IRI Analyzer data across their total US grocery database to DeCA CONUS dollar volume across 264 categories. We found that DeCA sold 22.7% of goods on promotion while only 20.1% of the goods in supermarkets were sold on promotions. This figure was then confirmed in the vendor interviews. Again, the primary driver of the higher promotional spend is that vendors achieve a 100% pass through on all promotions. The pass through in the supermarket channel is estimated to be approximately 75%-80%.

The Sales and Marketing line item includes headquarters sales coverage, retail sales coverage, retail stocking, resets, marketing support, category management support and other general selling expenses. Vendor sales coverage is made up of primarily a broker network which is included in cost of goods (not in this group of costs). What is unique to DeCA is the dedicated vendor stocking support that is provided. The net difference is that vendors provide supermarket retailers a great deal more category management support and marketing support. Vendors are not able to provide DeCA marketing support. It is not uncommon for vendors to have 100 to 200 people onsite at some of the large volume chains building shelf schematics, managing inventories, and providing analytical support.

Finally, the Other Costs of Doing Business line item generally represents the cost of purchasing syndicated data to support customer analyses. Vendors spend significantly more dollars purchasing data to support supermarket category management programs. Some retailers even bill vendors directly for point of sale data to the tune of $250,000 a year. Vendors purchase syndicated data for DeCA but on a much smaller scale.

Net, net, vendors are making 2.7% more today at DeCA than a commercial supermarket operator. Most vendors would agree with this statement and suggest that if DeCA went to a variable pricing program and managed a profit model, the vendor's Cost-to-Serve DeCA would increase and eventually would trend toward the commercial supermarket model.

Appendix 3: Political Assessment

Over the course of this 45 day study, the project team met with five policy makers including:

- John Molino, Deputy Undersecretary of Defense (Military Community and Family Policy)
- Janis White, Director Resale Activities and NAF Policy
- Mike Higgins, Dudley Tademy and John Chapla, U.S. House Armed Services Committee Professional Staff

Due to the time constraints of the study, the project team was unable to schedule a meeting with the U.S. Senate Armed Services Committee Professional Staff.

Department of Defense Perspective

The Department of Defense voiced support for the maintenance of the commissary benefit at the 30% level, but reasoned that it is appropriate to explore opportunities to reduce the appropriation level for the commissaries. Annual Congressional appropriations have exceeded $1 billion for several years. While they could not define a specific reduction level, a target appropriation under $1 billion was considered reasonable.

Regarding the commissary benefit, DoD's believes the commissary should be considered as a benefit primarily to active duty military. Currently a large portion of commissary shoppers are retirees. Both active duty personnel and retirees are enjoying the benefits of commissary privileges and the annual Congressional appropriation is supporting this benefit equally to active duty personnel and retirees.

National brand opposition to both variable pricing and (prior) private label initiatives at DeCA invites several questions. Studies have shown that a private label program can improve the price image for both national brands and stores alike. These programs have generated a great deal of success for the commercial sector. Why would these same suppliers oppose variable pricing within DeCA, unless their profitability within DeCA is that much greater than in the commercial sector? If profitability within DeCA is higher for a national brand, how effective is DeCA at managing and monitoring price warranties and ROAs?

Congressional Perspective

The House Armed Services Committee strongly supports the commissary benefit for all eligible patrons. Among all eligible patrons, they believe there to be tremendous awareness of commissary benefits, greater than that of other benefits available to them.

Commissaries are high on customer surveys which have evaluated non-compensation benefits, generally on par with medical benefits. Their sense is that the commissary benefit reaches every military home and makes a difference in the quality of life of the military today. In addition, the commissary benefit is a powerful retention and recruiting tool, especially for patrons with families.

Opposing the Department of Defense view on the annual appropriation, the staffers interviewed noted that no member of Congress wants to find savings in the commissary budget. They believe this is not an area where members perceive there to be excess money available; the commissary appropriation is a line item in the budget that Congress wants to protect.

Appendix 4: Supercenter Impact on the DeCA Savings Rate

Supercenters such as Wal-Mart Supercenter, SuperTarget, and Meijer are changing the face of the retail food industry.

- ✓ ***Appeal*** – Their one-stop shopping offer—food, apparel, health & beauty care, general merchandise, and hard-lines available under one roof—and exceptionally low grocery prices (approximately 15% lower than supermarket prices[51]) are attracting shoppers across the country.

- ✓ ***Growth*** – The supercenter format is enjoying explosive growth, and is expected to comprise over 15% of the U.S. grocery industry by 2007, up from only 9.9% in 2001[52].

- ✓ ***Impact on Patron Savings Benefit*** – The DeCA patron savings benefit is calculated by comparing commissary prices to average U.S. grocery prices as reported by Information Resources Inc. (IRI) syndicated data.

  - ➢ Since 2001, supercenters no longer report their sales data to IRI. Consequently, DeCA has applied a Supercenter Adjustment Factor to subsequent DeCA-IRI data comparisons to account for the supercenter influence on the patron savings rate.

  - ➢ The current Supercenter Adjustment Factor (1.5 points) is subtracted from the IRI-based patron savings rate to create the actual savings rate. E.g., if the IRI-based savings rate is 33.6%, the adjusted savings rate reported throughout DeCA is actually 32.1%.

Supercenter Adjustment Factor:
Supercenter Impact on Patron Savings Rate

	2001	2002	2004 est.	2007 est.
Supercenter Share	9.9	10.1	12.3	15.4
Share Increase vs. 2001		2.5%	24.7%	56.6%
Supercenter Adjustment Factor - Original	1.50			
Supercenter Adjustment Factor - Updated		1.54	1.87	2.35
Change in Supercenter Adjustment Factor		0.04	0.37	0.85

Source: Willard Bishop Consulting

---

[51] Willard Bishop Consulting Retail Pricing Analyses

[52] Willard Bishop Consulting 2003 Store Format Report

- However, since supercenter share of industry sales is growing, the current Supercenter Adjustment Factor no longer reflects current supercenter influence. It needs to increase at the same pace as supercenter growth.

- By 2007, the Supercenter Adjustment Factor will need to increase to 2.35 points (an increase of 0.85 points since 2001). Without this adjustment, a patron savings rate calculated at 30.0% in 2007 will reflect an actual patron savings of only 29.15%.

Appendix 5: DeCA Capabilities Assessment

Category Management Assessment

Overview

Category management is a process that was developed in the early 1990's in the grocery channel to provide trading partners with an objective business-building framework they could use together to deliver greater value to consumers. By definition, category management is, "a trading partner process of managing categories as strategic business units, producing enhanced business results by focusing on delivering greater consumer value."[53]

This framework is often guided by retailers and executed with a tremendous amount of financial and knowledge-base support from manufacturer partners. Manufacturers serve as category advisors, typically one per category, and are selected based on their ability to provide credible, objective consumer and market-level information and support. Manufacturers vie for this coveted and important position and if chosen, are expected to help the retailer improve total category performance, not just the performance of the manufacturer's brands.

The category management step-by-step process usually starts with setting individual category strategies and ends with an annual implementation plan. Much of the process focuses on understanding how the various customer demographic groups shop the category and what changes in space, assortment/variety, pricing and promotions should be implemented and adjusted to deliver greater consumer value.

Annual plans are generally created for each store cluster and set size. A cluster typically represents a group of stores serving like consumer groups. Often stores are clustered around geographic income areas and around customer demographic groups. The intent is to deliver a plan that is best suited to meet the needs of the target consumer groups in a particular store's trading area. Some plans today are even implemented uniquely, on a store-by-store basis.

Why is understanding category management important for an assessment of variable pricing at DeCA? It is important because price management and variable price optimization is a key component of developing a category management program, and a well established category management structure and process needs to be in place first, before a retailer can really establish a sound pricing department. Price optimization has to be managed in the context of a larger, overall category plan because profit optimization has to be balanced with other value decisions that are designed to increase consumer satisfaction levels. For example, one category plan may call for expanding

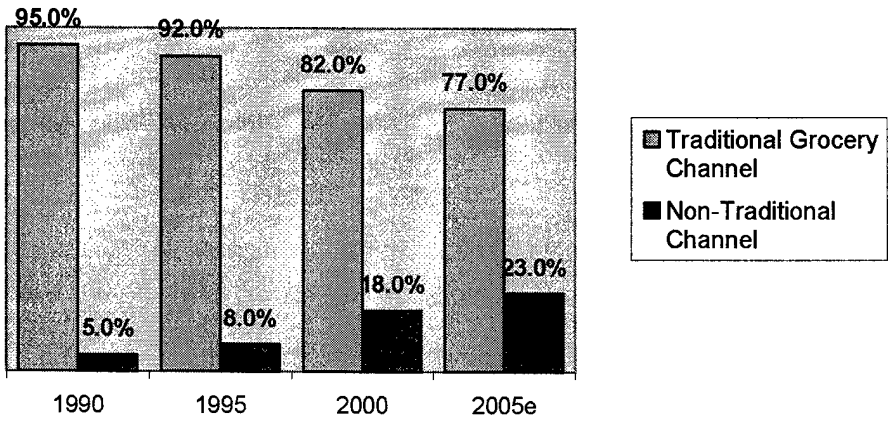
---

[53] ECR Category Management Subcommittee (1995), *Category Management Report Enhancing Consumer Value in the Grocery Industry,* vii.

product variety and reducing price/margin in order to drive traffic into the store, or to drive aisle penetration so that sales can grow in other parts of the store that are not currently achieving adequate traffic. As such, pricing decisions cannot be made in silos.

One may ask, how did retailers manage prices before there was category management? The answer is, not very well. Not well because there was no need to. Wal-Mart didn't exist in the grocery channel and competition generally consisted of regional chains that were comfortable with their fair share. Pricing decisions often were made based on weekly competitive price checks and stores within close proximity of each other often used a matching strategy. It left consumers with making store decisions simply based on location, cleanliness and service. Today, hyper-competition exists due to the growth of discount operators; additionally, many formats now sell groceries at very low margins to generate store traffic. The erosion of grocery sales from traditional supermarket chains to non-traditional grocery formats since 1990 has been nothing short of alarming. In 1990, supermarkets had a 95% share of all consumer grocery spending. By 2005, that figure will drop to 77%, nearly a 20% point drop in only 15 years.

Share of Grocery Sales



Non-traditional grocery channel includes super centers, club stores, hypermarkets and deep discounters. Non-traditional grocery channel sales only include categories typically found in supermarkets. Source: Willard Bishop Consulting, *Competitive Edge: Store Format Trends, 1990, 1995, 2000, 2003*

Intensive competition has significantly elevated the importance of price management. But, pricing cannot be managed in a vacuum. It must be part of an overall category management framework that looks at all pieces of the consumer's value equation, i.e., the components that consumers look at to decide on which store or group of stores to shop.

Category Management - A Prerequisite to Variable Pricing

While there are many components to a well-run category management program, there are essentially five key areas that make up the bulk of the work that goes into category reviews and developing category plans. They include:

- ✓ **Developing Consumer Decision Trees** – Understanding how consumers shop the category so that sections can be laid out in a logical way that matches the consumer's decision making process at the shelf. For example, if we know that cheese consumers today make purchases based on the following hierarchy, then we would develop the section first by grouping like forms together, then within forms, by flavor, then within flavor by brand, etc.

    1. Form first – shreds, slices, block, cube etc.
    2. Flavor second – cheddar, American Swiss, etc.
    3. Brand third – Kraft, Sargento, private label, etc.
    4. Size fourth – 12 oz, 16 oz, etc.

    This is the most important step in category management.

- ✓ **Determining Efficient Assortment** – Developing optimal mix of brands and SKUs that provide adequate variety based on consumer needs in that trading area/store. Most consumers define variety based on the number of brands a retailer carries.

- ✓ **Optimizing Category Space** – Determining optimum space to accommodate delivery schedules, days-of-supply targets, case-pack minimums, promotional volume growth and everyday SKU-level performance.

- ✓ **Implementing Effective Promotions** – Determining type of promotion, location of promotion and size of discount to optimize traffic and profit.

- ✓ **Determining Optimum Pricing** – Determining price by SKU, based on competitive situation, category strategy, assortment levels and overall store strategy. A further description of pricing will be addressed in the next section of this chapter.

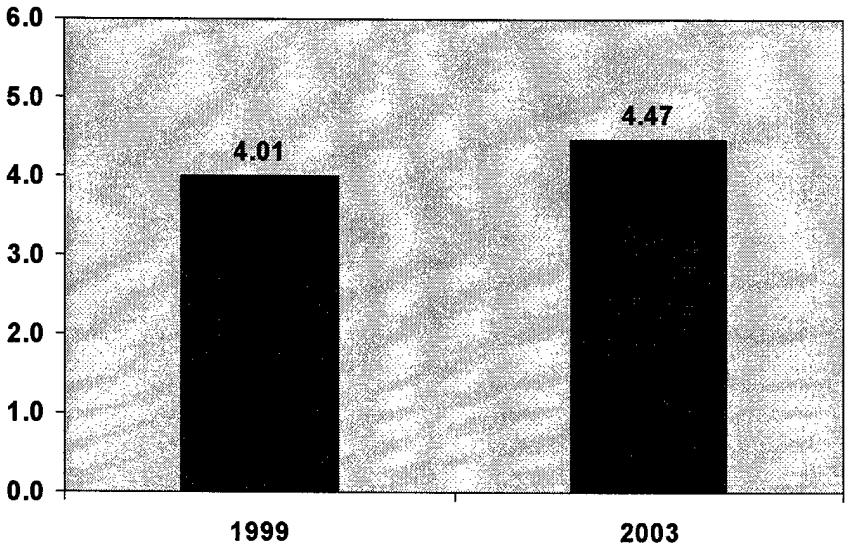
Each of these areas is integrated within the overall category plan and as such, cannot be developed in isolation or independent from one another. In addition, pricing is often one of the last steps in developing the category management plan because the other components have to be in place first before the pricing analysis can be finalized. For this reason alone, DeCA must look at their current category management program and be prepared to make significant enhancements to this department before, and if, variable pricing is implemented.

What Are the Implications for DeCA?

Today, DeCA has a category management department and category review process in place. However, this department does not contain all of the processes or tools typically found in the commercial supermarket channel because many of the components simply are not necessary to support a not-for-profit model. Our assessment has concluded that DeCA's category management department and approach are quite adequate given what they are able manage - space, assortment/variety and promotions. DeCA works with manufacturer partners to understand changing consumer dynamics and resulting shelf changes; they do a good job of leveraging their manufacturer knowledge-base to identify and address these opportunities.

DeCA involves multiple manufacturer partners in each category to identify changes that need to be implemented each year at the shelf to satisfy changing patron needs. Based on recent DeCA patron surveys, they have been able to keep up with changing consumer dynamics and variety needs.

Variety/Selection Rating
(Center Store)



Scale: 0 = Very Poor; 5 = Very Good
Source: *Customer Service Evaluation System (CSES) Survey*, 1999, 2003.

However, our assessment of DeCA's buying and category management organization revealed that DeCA's category management department is not currently set up to support a variable pricing program or for that matter, a profit model like those found at commercial supermarkets. Before a variable pricing department can be formed, DeCA would need to address this issue. They would need to modify their processes, tools, skills and profit optimization capabilities in order to be on the same playing field as competitive supermarket operators. This cannot happen over night and while they

would not have to develop a best-in-class category management department, at minimum, they would need to be at par with an average or typical supermarket retailer if they want to be able to compete on price and value.

First, DeCA would need to enhance their category management program to allow for an establishment of more formal and structured framework. The interviews with DeCA's manufacturer partners confirmed that a well-established category management process and greater discipline will need to be established in order for DeCA to operate like commercial supermarkets. Performance goals will need to be established by category. These performance goals need to be clearly communicated and roles and responsibilities need to be clearly aligned so that everyone is approaches category management with the same consistency and direction. This is critical to DeCA achieving their overall total-store revenue generating goals that meet appropriation reduction goals.

Category Management Framework Comparison

Category Management Framework	Best-in-class Supermarket	Typical Supermarket	DeCA
Interview/Bid for Dedicated Category Advisors	Yes	Yes	No
Annual Plan With Roles & Responsibilities	Yes	Yes	No
Establish Mutual Financial Goals	Yes	Yes	No

Second, DeCA would need to enhance their ability to analyze variety and develop efficient assortment levels by category and by store cluster within each category. Today, DeCA develops assortment targets with the support of manufacturer partners, much like what occurs in the commercial supermarket channel. However, DeCA's assortment plans are generally developed with less information and less analytics than what typically occurs at commercial chains. This is the direct result of DeCA's not needing to develop either assortment plans that balance variety with profit or plans that take into account return on shelf space. The ROI component of commercial supermarket category plans, which is very important and a key driver of assortment analyses, is not necessary for DeCA today.

DeCA's assortment analyses are done on a more limited basis today compared to commercial supermarkets and we expect the sophistication level would rise commensurate with incorporating profit optimization modeling.

Assortment Analyses Comparison

Efficient Product Assortment	Best-in-class Supermarket	Typical Supermarket	DeCA
Efficient Assortment Modeling & Tools	Yes	Yes	No
Consumer Decision Tree	Yes	Yes	Limited
Spectra Geo/Demographic Clustering	Yes	Yes	Limited
Growth Data	Yes	Yes	Limited
Market-level Data	Yes	Yes	Limited
Distribution Voids Data	Yes	Yes	Limited
Affinity/Market Basket Data	Yes	Limited	Limited
Loyalty Indices Data	Yes	Yes	No
Assortment Rules By Competitive Set	Yes	No	No

If DeCA moved to a variable pricing model and managed profit at the category level, they would need to:

- ✓ invest in more analytical and assortment modeling tools that leverage profit and ROI metrics to help make assortment decisions
- ✓ expand their information technology capabilities
- ✓ expand capacity to develop the rules-based methodology around the new assortment program
- ✓ expand capacity to accommodate additional analytical time

Third, we expect DeCA would need to migrate to more schematic variations that relate more closely with local market area needs. In our assessment of DeCA, we found their space management and reset management work to be at par and in some cases ahead of the commercial supermarket channel. DeCA maintains up-to-date schematics and they have developed a very well-organized and disciplined shelf implementation program.

Space/Reset Management Comparison

Space Management	Best-in-class Supermarket	Typical Supermarket	DeCA
Schematics for Each Set Size	Yes	Yes	Yes
Schematics By Store Cluster	Yes	Yes	No
Store Specific Schematics	Yes	No	No
Reset Management			
Well Coordinated	Yes	Yes	Yes
Vendor Supported/Funded	Yes/No	Yes	Yes

DeCA's reset program can be considered best-in-class in terms of implementation. They have dedicated reset teams and follow a schedule that leverages strong support from manufacturer partners. Some manufacturers, however, feel that DeCA could do a better job of ensuring schematic compliance at the store level. It is not uncommon for shelf sections to only match recommended schematics with an 80% accuracy rating in the commercial channel. This is usually an issue for every retailer and we do not see DeCA falling outside of this norm. However, with a more structured category management program, we expect compliance will improve.

Fourth, managing promotion spending to ensure all available funds are used most effectively to optimize traffic, loyalty and profit is an important component in developing category plans. Compared to commercial supermarkets, DeCA applies a limited use of promotional information from manufacturer partners, as well as internal performance data, to deliver optimum promotions. Again, the gap between DeCA and the commercial sector is driven primarily because DeCA does not operate in a profit environment.

Promotion Management Comparison

Promotion Management	Best-in-class Supermarket	Typical Supermarket	DeCA
Promotional Calendar	Yes	Yes	Limited
Use Lift Tables	Yes	Yes	Limited
Promotion Simulations	Yes	Yes	No

DeCA would need to advance their promotional analytical skills and dedicate more labor and time to understanding how to make best use of available promotional space, promotional messages, and other promotional management tools in a variable pricing environment. Supermarket chains today have placed a significant emphasis on

promotional management and link promotions and pricing to optimize store traffic and profitability.

In a variable pricing environment, managing the location of promotional displays, depth of promotion, frequency of promotion, number of promotions within a category or within an aisle or within the store are important.

Finally, price management, as part of an overall category management program, would need to be completely developed for obvious reasons. The details of what DeCA would need to implement are outlined in the next section of this chapter but clearly, they would need to create a new capability that supports development of a total store and category pricing strategies.

Price Management Comparison

Price Management	Best-in-class Supermarket	Typical Supermarket	DeCA
Strategy By Price Zone	Yes	Yes	No
Strategy By Competitive Set	Yes	No	No
Price Gap Analyses	Yes	Yes	Limited
Price Gap Analyses by Zone	Yes	Yes	No
Price Optimization Modeling	Yes	No	No

Tool, systems, information and tactical responses would need to be developed and instituted.

From an organizational standpoint, and just looking at the three groups that make up the core category analytics, DeCA is on par with a comparable 275-store commercial supermarket chain with the number of buyers they currently employ.

Category Management Staff Comparison

Number of FTEs (Full Time People)

	275-Store Supermarket Chain	Current DeCA Staffing
Category Management	25	6
Buying	15	14
Space Management	13	8

DeCA, however, would need to add an additional five space management people to cover the increased number of schematics that will be developed as a result of the

increased level of assortment analyses and more robust category management program. In addition, DeCA will need to quadruple the number of category managers from 6 to 25. The estimated cost of both sets of additions is greater than $2.3 million on an annual basis.

Additional Staffing Requirements

	# Additions	Salary	Benefits @ 26%	Total
Category Management	19	$ 80,000	$ 20,800	$ 1,915,200
Space Management	5	$ 70,000	$ 18,200	$ 441,000
Total				**$ 2,356,200**

We would estimate the incremental cost for the additional tools, software and systems upgrades necessary to run a category management program in a profit-model mode would be an additional $500,000 to $1,000,000. These figures are based on the following:

- ✓ Assortment software = $100,000 - $200,000 (annual)
- ✓ Information upgrade = $200,000 - $300,000 (annual)
- ✓ Systems upgrades = $250,000 - $500,000 (one time)

Implementation Timeline

As DeCA considers a variable pricing initiative, they should plan on an 18 to 24 month implementation timeline to ensure that the necessary organizational, training and technology changes are in place to be in a position to execute the category reviews and implement the category plans effectively.

Pricing Department/Personnel

A move to variable pricing will require DeCA to create a pricing department to manage the entire pricing process. An analysis of retail pricing departments, practices, and systems in place at "best-in-class" retailers, "average" supermarket operators, and DeCA will help identify the true breadth and depth of organizational change required to implement variable pricing throughout the DeCA organization. While DeCA would not have to implement a best-in-class pricing department, at minimum they would need to be on par with an average supermarket to effectively implement variable pricing.

- ✓ ***Best-in-Class Supermarkets*** – Best-in-class operators have dedicated pricing departments averaging approximately 15-25 people responsible for setting prices, managing price image, and analyzing price-based opportunities to enhance competitive position.

  - ➢ **Personnel** – The pricing staff includes:

    - One director responsible for managing the department.
    - Two-to-four managers responsible for specific pricing functions, e.g., price-setting, price optimization, competitive analysis, etc.
    - Five-to-ten analysts supporting the managers.
    - Five-to-ten support staff including technical personnel to run price management systems/applications, and field personnel responsible for facilitating competitive price-checking and supporting store-level pricing requirements.

  - ➢ **Skills/Experience** – Best-in-class pricing staff have experience applying price optimization technology/modeling to the price-setting and analytical process. They are also adept at modeling/simulating the future impact of price changes on sales, profits, price image, and competitive position. Additionally, the best pricing departments include a blend of individuals, e.g., some with store operations experience and others with extensive analytical backgrounds.

- ✓ ***Average Supermarkets*** – The average supermarket chain also maintains a dedicated pricing department comprised of approximately four-to-six people who are responsible for pricing across a limited number of market areas.

  - ➢ **Personnel** – The pricing staff includes:

    - One director/manager responsible for managing the department.
    - Three analysts who manage/execute the price-setting process.
    - One-to-two support staff who run price maintenance systems/applications.

  - ➢ **Skills/Experience** – Pricing staff at "average" retailers have extensive experience setting/managing prices across multiple price zones, blending shelf and promotional prices to meet margin objectives, and analyzing competitive prices and determining short-term response tactics. Department staff also have experience in store operations.

- ✓ ***DeCA*** – DeCA does not currently require a dedicated pricing organization. Prices are set and managed by vendors with the support of DeCA technical/systems personnel. Additionally, DeCA's current buyer staff has little price-setting or margin management experience from outside the organization.

- ✓ ***DeCA Requirements to Implement Variable Pricing*** – If DeCA were to implement a variable pricing system (Option 1), they would need to establish a dedicated pricing department to manage and execute the price-setting, maintenance, and analytical processes.

  - ➢ **Personnel (Option 1)** – DeCA would need approximately eight-to-12 people to run the dedicated pricing department required to execute full variable pricing under Option 1, including a department director, two-to-four pricing managers – each responsible for pricing within selected departments, approximately four pricing analysts to support the pricing managers, and two-to-four support/technical staff to run a new price management system. Personnel costs (salaries and benefits) associated with this new pricing department are estimated at $600,000 per year (minimum).

  - ➢ **Skills/Experience (Option 1)** – DeCA would need to populate the new pricing department with a combination of individuals with retail pricing experience from other organizations, and current DeCA staff with store operations and technical backgrounds.

  - ➢ **Personnel/Skills (Options 2, 3, 4)** – Options 2, 3, and 4 will require DeCA to add pricing staff to the existing category management structure, i.e., a dedicated pricing department is not needed. Approximately two pricing team members (manager and analyst) should be able to fulfill pricing requirements under each option. Personnel costs for the two required team members are estimated at approximately $150,000 per year (minimum).

Strategy/Execution

Supermarket retailers are increasingly adopting sophisticated retailer pricing strategies, conducting high-level analyses, and executing efficient/effective support tactics.

- ✓ ***Best-in-Class Supermarkets*** -- Best-in-class operators are executing their pricing strategies with the support of sophisticated price optimization applications.

  - ➢ **Strategy** – They employ rules-based guidelines to direct their price optimization applications, and actively manage prices across multiple price zones determined by region/market and the proximity/power of key competitors. Ultimately, best-in-class retailers are moving toward store-level

pricing based on the specific needs and shopping behavior of local consumers.

Additionally, top retailers manage prices from the consumer point-of-view by analyzing—and determining opportunities to enhance—each of the six dimensions of price image.

- Known-value item prices across the entire store, i.e., the prices that disproportionately impact price image.
- Everyday shelf prices in all categories.
- Promotional prices/offerings of all types.
- Per-unit values to attract price-conscious shoppers.
- Opening price-points to draw shoppers from alternative formats.
- Price communication strategies/tactics to efficiently and effectively get the word out.

This six dimensional approach is helping leading retailers increase same-store sales and gross profit dollars without unnecessarily sacrificing margin or provoking price wars, i.e., under the radar.

➢ **Competitive Analyses** – Best-in-class operators continuously measure their center-store and peripheral perishables price position versus all key competitors, i.e., supermarkets and alternative formats such as supercenters, limited-assortment stores, etc. in each of their market areas. These retailers also regularly measure their price image, both qualitatively (via consumer focus groups and/or surveys) and quantitatively (through weighted competitive price indexing).

➢ **Store-Level Execution** – Best-in-class retailers are executing most price changes on a weekly basis, but are moving toward adopting more frequent price adjustments, e.g., day-part pricing, on selected commodities. In fact, Safeway U.K., is running a test that links their price optimization system to in-store electronic shelf labels to facilitate day-part pricing.

✓ ***Average Supermarkets*** – Average supermarket retailers are establishing comprehensive pricing strategies, featuring item/category/department guidelines and rule-sets governing price setting.

➢ **Strategy** – Average supermarkets are employing price-setting guidelines to direct:

- Total store, department, category, and item prices.
- Responses to competitive price actions.
- Zone pricing.
- Parity/spread pricing across similar SKUs of various sizes, flavors, etc.
- Private label pricing.

- Price-scaling – ensuring each larger size provides an incrementally stronger per-unit value.
- Price communication.
- Price check execution, including competitor targets, price check frequency, etc.

➢ **Competitive Analyses** – Average supermarkets periodically compare center-store prices to those at key supermarket competitors. They typically analyze perishables prices, and prices at alternative formats on an as needed/ad-hoc basis.

➢ **Store-Level Execution** – Average retailers conduct weekly price changes, generate new shelf tags at store level, and are experimenting with electronic shelf labels (ESLs).

✓ ***DeCA*** – While DeCA's current business model does not require a strategic focus, it does require DeCA to efficiently execute price changes at store-level.

➢ **Strategy** – DeCA's current pricing strategy is simply to set all shelf prices at DeCA cost (plus a 5% surcharge at the checkout). The strategy allows DeCA and vendors the flexibility to zone price in areas with higher cost-to-serve, e.g., OCONUS markets.

➢ **Competitive Analyses** – DeCA employs a sophisticated analytical process to measure their price offering versus average supermarket prices, and determine the patron savings benefit. DeCA updates these department/category analyses on a monthly basis.

➢ **Store-Level Execution** – DeCA conducts bi-monthly price changes, generates new shelf tags at store level—organized by aisle, and is experimenting with ESLs in approximately six stores.

✓ ***DeCA Requirements to Implement Variable Pricing*** – If DeCA were to implement a variable pricing framework (Option 1), they would need to 1) establish a comprehensive pricing strategy with category, department and total store objectives, to guide the price-setting/management process, and 2) expand current competitive analyses to assess competitor prices ona regional or market level.

Systems/Tools

Supermarket retailers across the country—and around the world—are leveraging the power of state-of-the-art price management and price optimization systems to facilitate and automate the price-setting, management, and analytical processes.

✓ ***Best-in-Class Supermarkets*** – Best-in-class operators are implementing the latest commercial price management and price optimization systems.

- **Price Management Systems** – These support systems help retailers apply complex, rules-based pricing strategies, and manage a wide variety of guidelines/constraints. Top systems are provided by such firms as TCI (HQ Price Manager), Soft Solutions, and Retek. They cost $1 million to $3 million (including implementation), require a 18% annual license fee, and are fully functional within 18 months.

- **Price Optimization Systems** – These systems apply complex algorithms to analyze historical consumer spending/demand curves and determine "optimal" item-level price points that maximize sales, profit, or price image. There are only two system providers supporting the U.S. supermarket industry, i.e.,

  - Demandtec – used by HEB and D&W Food Stores
  - Khimetrics – used by Alberson's, Big Y, and Safeway U.K.

  System costs vary widely depending on specific retailer needs, but can be expected to average approximately $1 million per year over a 10 year period, and take approximately 18 months to implement.

✓ ***Average Supermarkets*** – Average retailers employ "dated" price maintenance systems that are designed to maintain item price files and transmit prices to store-level.

- **Price Maintenance Systems** – Many supermarkets across the country continue to maintain their prices though older commercial systems such as those supplied by BASS and AC Nielsen (Priceman), or internal proprietary systems. However, "average" supermarkets are increasingly switching over to sophisticated price management systems described above.

- **Price Optimization Systems** – The average supermarket has not yet taken advantage of price optimization applications. However, there is strong interest in these systems, and many retailers are planning to implement price optimization over the next five years.

✓ ***DeCA*** – DeCA currently maintains their prices though their DIBS and COPPS systems. However, while these systems effectively manage item price files and transmit prices to stores around the world, they are not designed to facilitate price-setting or complex analytics.

✓ ***DeCA Requirements to Implement Variable Pricing*** – Due to the complexity of implementing full variable pricing at DeCA (Option 1), DeCA would need to procure and implement a new, state-of-the-art price management system (months 1-18) followed by a price optimization system (months 19-36). However, few system enhancements would be required to implement/execute Options 2, 3, and 4.

Appendix 6: Economic Model Sensitivity Analysis

We tested the sensitivity of key inputs to the economic models, to determine the potential impact to our conclusions from any variation in these impacts. We also tested combinations of options to see if the result changed.

Option 1

The key sensitivity variable in Option 1 is our judgment that 100% of vendor stocking support and excess promotional allowances would be lost. We believe this is the most likely outcome.

We tested the impact of DeCA experiencing a loss of only 50% of these amounts. We believe it is highly unlikely that the loss would be this low, and we are highly confident that the loss could not be lower. Using the 50% assumption, the net margin impact of Option 1 shifts from negative $29 million to positive $35 million. This is below our implementation threshold. Accordingly, this test does not alter our confidence in our overall conclusion that DeCA should not implement variable pricing.

Option 2

The key sensitivity variable in Option 2 is our judgment that DeCA would only realize 50% of the total 2.7% potential price reduction from vendors. We believe this is the most likely outcome.

We tested the impact of DeCA realizing the full 2.7% reduction. We believe it is highly unlikely that DeCA could achieve this entire amount. Using the 2.7% assumption, the net margin impact of Option 2 shifts from negative $61 million to negative $6 million. Accordingly, this test does not alter our confidence in our overall conclusion that DeCA should not implement variable pricing.

Option 3

The key sensitivity variable in Option 3 is our judgment that DeCA would only realize 50% of the total 2.7% potential price reduction from vendors. We believe this is the most likely outcome.

We tested the impact of DeCA realizing the full 2.7% reduction, and passing 50% of this amount on to patrons. We believe it is highly unlikely that DeCA could achieve this entire amount. Using the 2.7% assumption, the net margin impact of Option 3 shifts from negative $88 million to negative $60 million. Accordingly, this test does not alter our confidence in our overall conclusion that DeCA should not implement variable pricing.

Option 4

The key sensitivity variable in Option 4 is our judgment that 50% of vendor stocking support and excess promotional allowances would be lost. We believe this is the most likely outcome, and that a larger amount could be potentially lost.

We tested the impact of DeCA experiencing a smaller loss of vendor support, equal to the 19% volume change. We believe that this level is unrealistically low, and that it is extremely unlikely that the loss would be this low. Using the 19% assumption, the net margin impact of Option 4 shifts from positive $21 million to positive $53 million. This result is essentially at our implementation threshold, but does not justify implementation since the 19% lost vendor support assumption is unrealistic. Accordingly, this test does not alter our confidence in our overall conclusion that DeCA should not implement variable pricing.

Option Combinations

There are two potential combinations of options:

- Option 1 combined with Option 2: This results in a net margin impact of positive $24 million.
- Option 1 combined with Option 4: This results in a net margin impact of negative $6 million.

Neither combination changes the overall conclusion that DeCA should not implement variable pricing.

Appendix 7: Legislative Considerations

As noted in the Conclusions to this study, variable pricing is not economically viable within DeCA. If variable pricing were a viable option, several legislative changes would need to be undertaken. As an assessment of legislative change is a requirement of the Statement of Work, considerations for legislative change are detailed below.

- Section 2486 (d)[54] – Sales Price Establishment will require modification before DeCA could implement any variable pricing option.

  (1) Allows the Secretary of Defense to set commissary prices to recoup actual product cost, which can include first destination cost in the United States and the cost of shrinkage, spoilage and pilferage.

  (2) Requires the Secretary of Defense to notify Congress of any change in commissary pricing policy and requires 90 days of continuous session of Congress to expire before the change can take effect.

- Section 2486 (e)[55] – Special Rule for Brand-Name Commercial Items is broadly defined to allow for modification to DeCA procurement practices for brand name items.
  - Allows the Secretary of Defense to use non-competitive procurement practices for national brand products, but does not require non-competitive practices.
  - Section 2486 (e) would require further investigation if Options 2 or 3 were to be implemented (Competitive bidding by national brands for shelf-space). In our estimation, a change to the statute would not be required to Section 2486 (e) because of the broadly defined wording which allows modification but does not require non-competitive practices.

- DoD 1330.17-R Armed Services Commissary Regulation (ASCR), Paragraph 4-801[56] – Advertising.
  Policy states that appropriated funds shall not be used for advertising and that DeCA cannot advertise.
  - To achieve BVI volumes (Option 4) on a scale consistent with commercial grocery, it is suggested that DeCA market the BVI program, as a grocery

---

[54] U.S. Code, Title 10, Subtitle A, Part IV, Chapter 147, Section 2486.

[55] Ibid.

[56] DoD 1330.17-R Armed Services Commissary Regulation (ASCR).

chain would promote their private label brand. The policy above will require modification if Option 4 were under consideration and promoting the BVI program were considered.

Appendix 8: Demonstration Project Feasibility

Conducting a demonstration project to pilot test the implementation of a variable pricing system within a subset of DeCA commissaries and/or NEXMARTs, should only be considered if the economic analysis concluded that variable pricing would meet DeCA's stated objectives for additional margin to lower appropriated fund cost while maintaining customer savings at 30%.

This study proved that variable pricing is not economically viable for DeCA. Therefore a demonstration project should not be considered.

If variable pricing were a viable alternative for DeCA, a demonstration project should only be considered to assess two potential areas of risk:

- Patron reaction – A small scale pilot project can be effective in testing customer reactions to many different types of initiatives and has been used successfully by retailers to test product concepts, operating procedures, store layouts and other initiatives which require customer acceptance as a key success factor.

- DeCA capabilities (personnel and systems) – Pilot projects are also important tools to test organizational capabilities, new technologies and the success of user training programs. By introducing a new program on a small scale, the implementation effort can focus on addressing quality issues on a small scale rather than focus on mission critical functions that often are impacted through a large scale introduction.

Unfortunately, if Vendor Reaction is a potential unknown, a demonstration project cannot adequately assess Vendor Risks, as a small scale pilot (under 5% of DeCA sales) will not create significant attention or focus by the national brand vendors to generate a "realistic" reaction which can be measured to assess long-term impact to the business model.

Finally, any test of variable pricing would require legislative change, or a temporary exception, to U.S. Code, Title 10, Subtitle A, Part IV, Chapter 147, Section 2486 (d) to allow for a change to DeCA's pricing policy.

Appendix 9 – Economic Assessments

DeCA Variable Pricing Feasibility Study

Option 1: Full Variable Pricing - Economic Assessment

2003 DeCA Sales

	Sales Impact	Surcharge at 5%	Sales + Surcharge	Average Savings Rate	Commercial Equivalent Sales	Potential Margin Available to Offset Appropriation	
Total Sales	$ 5,037,782,568	$ 251,889,128	$ 5,289,671,696	32.1%	$ 7,790,385,414		
ex. Tobacco	$ (197,500,000)	$ (9,875,000)	$ (207,375,000)	32.1%	$ (305,412,371)		
ex. O/S Soft Drinks	$ (13,700,000)	$ (685,000)	$ (14,385,000)	32.1%	$ (21,185,567)		
Total Sales Impacted	$ 4,826,582,568	$ 241,329,128	$ 5,067,911,696	32.1%	$ 7,463,787,476	$ -	
Impact Analysis							
1) Price Increase to reduce savings to 30%:			**2.20%**				
Sales	$ 4,826,582,568	$ 241,329,128	$ 5,067,911,696	32.1%	$ 7,463,787,476	$ -	
Price Increase	$ 106,184,816	$ 5,309,241	$ 111,494,057	30.6%	$ 7,463,787,476	$ 106,184,816	Price change does not effect commercial equivalent volume/sales.
Result 1	$ 4,932,767,384	$ 246,638,369	$ 5,179,405,753			$ 106,184,816	
2) Negative customer reaction due to price increase:			**-1.62%**				
Sales	$ 4,932,767,384	$ 246,638,369	$ 5,179,405,753	30.6%	$ 7,463,787,476	$ 106,184,816	
Volume loss	$ (79,910,832)	$ (3,995,542)	$ (83,906,373)	30.6%	$ (120,913,357)	(1,720,194)	
Result 2	$ 4,852,856,553	$ 242,642,828	$ 5,095,499,380	30.6%	$ 7,342,874,119	$ 104,464,622	
3) Cost Impacts							
3a) Lost Vendor Support - Replacement Cost			**$ (43,861,984)**				
Sales	$ 4,852,856,553	$ 242,642,828	$ 5,095,499,380	30.6%	$ 7,342,874,119	$ 104,464,622	
Increased Cost	$ -	$ -	$ -		$ 7,342,874,119	$ (43,861,984)	
Result 3a	$ 4,852,856,553	$ 242,642,828	$ 5,095,499,380	30.6%	$ 7,342,874,119	$ 60,602,638	
3b) Lost Promotional (Pricing) Support - Product Cost Impact			**2.60%**				
Sales	$ 4,852,856,553	$ 242,642,828	$ 5,095,499,380	30.6%	$ 7,342,874,119	$ 60,602,638	
Increased Cost	$ -	$ -	$ -		$ 7,342,874,119	$ (126,174,270)	
Result	$ 4,852,856,553	$ 242,642,828	$ 5,095,499,380	30.6%	$ 7,342,874,119	$ (65,571,632)	
Amount passed on to the customer			**33.00%**				
Sales	$ 4,852,856,553	$ 242,642,828	$ 5,095,499,380	30.6%	$ 7,342,874,119	$ (65,571,632)	
Price passed through	$ 41,637,509	$ 2,081,875	$ 43,719,385		$ 7,342,874,119	$ 41,637,509	
Result 3b	$ 4,894,494,062	$ 244,724,703	$ 5,139,218,765	30.0%	$ 7,342,874,119	$ (23,934,123)	
3c) Incremental Operating Costs - Category Management and Pricing			**$ (4,941,000)**				
Sales	$ 4,894,494,062	$ 244,724,703	$ 5,139,218,765	30.0%	$ 7,342,874,119	$ (23,934,123)	
Increased Cost	$ -	$ -	$ -		$ 7,342,874,119	$ (4,941,000)	
Result 3c	$ 4,894,494,062	$ 244,724,703	$ 5,139,218,765	30.0%	$ 7,342,874,119	$ (28,875,123)	

Total Impacts	Sales	Surcharge	Sales + Surcharge	Savings Rate	Funds Available to Offset Appropriation
	$ 67,911,494	$ 3,395,575	$ 71,307,069	30.0%	$ (28,875,123)

DeCA Variable Pricing Feasibility Study

Option 2: Lower Product Costs - Economic Assessment

2003 DeCA Sales

	Sales Impact	Surcharge at 5%	Sales + Surcharge	Average Savings Rate (Adjusted Sales)	Total Savings Rate	Commercial Equivalent Sales	Potential Margin Available to Offset Appropriation	
Total Sales	$ 5,037,782,568	$ 251,889,128	$ 5,289,671,696	32.1%		$ 7,790,385,414		
ex. Tobacco	$ (197,500,000)	$ (9,875,000)	$ (207,375,000)					Acquired from Exchanges
ex. Meat	$ (380,563,651)	$ (19,028,183)	$ (399,591,834)					DeCA Commissary Store Statistics FY 2003, meat acquired from govt procurement processes
ex. Produce	$ (342,525,527)	$ (17,126,276)	$ (359,651,804)					DeCA Commissary Store Statistics FY 2003, produce acquired from govt procurement processes
Total Sales Impacted	$ 4,117,193,389	$ 205,859,669	$ 4,323,053,058	30.9%	32.1%	$ 6,258,179,134		
Impact Analysis								
1) Price change			**0.00%**					
Margin change			**1.35%**					
Sales	$ 4,117,193,389	$ 205,859,669	$ 4,323,053,058	30.9%	32.1%	$ 6,258,179,134		
Price Increase	$ -	$ -	$ -				$ 55,582,111	Price change does not effect commercial equivalent volume/sales.
Result 1	$ 4,117,193,389	$ 205,859,669	$ 4,323,053,058	30.9%	32.1%	$ 6,258,179,134	$ 55,582,111	
2) Negative customer reaction due to change in variety			**-1.97%**					
Sales	$ 4,117,193,389	$ 205,859,669	$ 4,323,053,058	30.9%	32.1%	$ 6,258,179,134	$ 55,582,111	
Volume loss	$ (81,108,710)	$ (4,055,435)	$ (85,164,145)	30.9%	32.1%	$ (123,286,129)	$ (1,094,968)	
Result 2	$ 4,036,084,679	$ 201,804,234	$ 4,237,888,913	30.9%	32.1%	$ 6,134,893,005	$ 54,487,143	
3) Cost Impacts								
3a) Lost Vendor Support - Replacement Cost			**$ (43,861,984)**					
Sales	$ 4,036,084,679	$ 201,804,234	$ 4,237,888,913	30.9%	32.1%	$ 6,134,893,005	$ 54,487,143	
Increased Cost	$ -	$ -	$ -			$ 6,134,893,005	$ (43,861,984)	
Result 3a	$ 4,036,084,679	$ 201,804,234	$ 4,237,888,913	30.9%	32.1%	$ 6,134,893,005	$ 10,625,159	
3b) Lost Promotional (Pricing) Support - Product Cost Impact			**2.60%**					
Sales	$ 4,036,084,679	$ 201,804,234	$ 4,237,888,913	30.9%	32.1%	$ 6,134,893,005	$ 10,625,159	
Increased Cost	$ -	$ -	$ -			$ 6,134,893,005	$ (104,938,202)	
Result	$ 4,036,084,679	$ 201,804,234	$ 4,237,888,913	30.9%	32.1%	$ 6,134,893,005	$ (94,313,043)	
Amount passed on to the customer			**33.00%**					
Sales	$ 4,036,084,679	$ 201,804,234	$ 4,237,888,913	30.9%	32.1%	$ 6,134,893,005	$ (94,313,043)	
Price passed through	$ 34,629,607	$ 1,731,480	$ 36,361,087			$ 6,134,893,005	$ 34,629,607	
Result 3b	$ 4,070,714,286	$ 203,535,714	$ 4,274,250,000	30.3%	31.6%	$ 6,134,893,005	$ (59,683,436)	
3c) Incremental Operating Costs - Category Management and Pricing			**$ (1,000,000)**					
Sales	$ 4,070,714,286	$ 203,535,714	$ 4,274,250,000	30.3%	31.6%	$ 6,134,893,005	$ (59,683,436)	
Increased Cost	$ -	$ -	$ -			$ 6,134,893,005	$ (1,000,000)	
Result 3c	$ 4,070,714,286	$ 203,535,714	$ 4,274,250,000				$ (60,683,436)	

Total Impacts	Sales	Surcharge	Sales + Surcharge	Savings Rate on Adjusted Sales	Total Savings Rate	Funds Available to Offset Appropriation
	$ (46,479,103)	$ (2,323,955)	$ (48,803,058)	30.3%	31.6%	$ (60,683,436)

DeCA Variable Pricing Feasibility Study

Option 3: Lower Product Cost and Share Savings with Patron - Economic Assessment

2003 DeCA Sales

	Sales Impact	Surcharge at 5%	Sales + Surcharge	Average Savings Rate (Adjusted Sales)	Total Savings Rate	Commercial Equivalent Sales	Potential Margin Available to Offset Appropriation	
Total Sales	$ 5,037,782,568	$ 251,889,128	$ 5,289,671,696	32.1%		$ 7,790,385,414		
ex. Tobacco	$ (197,500,000)	$ (9,875,000)	$ (207,375,000)					Acquired from Exchanges
ex. Meat	$ (380,563,651)	$ (19,028,183)	$ (399,591,834)					DeCA Commissary Store Statistics FY 2003, meat acquired from govt procurement processes
ex. Produce	$ (342,525,527)	$ (17,126,276)	$ (359,651,804)					DeCA Commissary Store Statistics FY 2003, produce acquired from govt procurement processes
Total Sales Impacted	$ 4,117,193,389	$ 205,859,669	$ 4,323,053,058	30.9%	32.1%	$ 6,258,179,134		
Impact Analysis								
1) Price Change			**-0.675%**					
Margin Change			**1.350%**					
Sales	$ 4,117,193,389	$ 205,859,669	$ 4,323,053,058	30.9%	32.1%	$ 6,258,179,134		
Price change	$ (27,791,055)	$ (1,389,553)	$ (29,180,608)				$ (27,791,055)	Price change does not effect commercial equivalent volume/sales.
Margin Change	$ -	$ -	$ -				$ 55,582,111	
Result 1	$ 4,089,402,334	$ 204,470,117	$ 4,293,872,450	31.4%	32.4%	$ 6,258,179,134	$ 27,791,055	
2) Negative customer reaction due to change in variety			**-1.97%**					
Sales	$ 4,089,402,334	$ 204,470,117	$ 4,293,872,450	31.4%	32.4%	$ 6,258,179,134	$ 27,791,055	
Volume loss	$ (80,561,226)	$ (4,028,061)	$ (84,589,287)	31.4%	32.4%	$ (123,286,129)	$ (547,484)	
Result 2	$ 4,008,841,108	$ 200,442,055	$ 4,209,283,163	31.4%	32.4%	$ 6,134,893,005	$ 27,243,572	
3) Volume change due to price decline			**0.5%**					
Sales	$ 4,008,841,108	$ 200,442,055	$ 4,209,283,163	31.4%	32.4%	$ 6,134,893,005	$ 27,243,572	
Volume change	$ 19,643,321	$ 982,166	$ 20,625,487	31.4%	32.4%	$ 30,060,976	$ 133,494	
Result 3	$ 4,028,484,429	$ 201,424,221	$ 4,229,908,650			$ 6,164,953,981	$ 27,377,065	
4) Cost Impacts								
4a) Lost Vendor Support - Cost for DeCA to Assume			**$ (43,861,984)**					
Sales	$ 4,028,484,429	$ 201,424,221	$ 4,229,908,650	31.4%	32.4%	$ 6,164,953,981	$ 27,377,065	
Increased Cost	$ -	$ -	$ -			$ 6,164,953,981	$ (43,861,984)	
Result 4a	$ 4,028,484,429	$ 201,424,221	$ 4,229,908,650	31.4%	32.4%		$ (16,484,919)	
4b) Lost Promotional (Pricing) Support - Product Cost Impact			**2.60%**					
Sales	$ 4,028,484,429	$ 201,424,221	$ 4,229,908,650	31.4%	32.4%	$ 6,164,953,981	$ (16,484,919)	
Increased Cost	$ -	$ -	$ -			$ 6,164,953,981	$ (104,740,595)	
Result	$ 4,028,484,429	$ 201,424,221	$ 4,229,908,650	31.4%	32.4%	$ 6,164,953,981	$ (121,225,514)	
Amount passed on to the customer			**33.00%**					
Sales	$ 4,028,484,429	$ 201,424,221	$ 4,229,908,650	31.4%	32.4%	$ 6,164,953,981	$ (121,225,514)	
Price passed through	$ 34,564,396	$ 1,728,220	$ 36,292,616			$ 6,164,953,981	$ 34,564,396	
Result 4b	$ 4,063,048,825	$ 203,152,441	$ 4,266,201,267	30.8%	32.0%	$ 6,164,953,981	$ (86,661,118)	
4c) Incremental Operating Costs - Category Mgmt and Pricing			**$ (1,000,000)**					
Sales	$ 4,063,048,825	$ 203,152,441	$ 4,266,201,267	30.8%	32.0%	$ 6,164,953,981	$ (86,661,118)	
Increased Cost	$ -	$ -	$ -			$ 6,164,953,981	$ (1,000,000)	
Result 4c	$ 4,063,048,825	$ 203,152,441	$ 4,266,201,267				$ (87,661,118)	

Total Impacts	**Sales**	**Surcharge**	**Sales + Surcharge**	**Savings Rate on Adjusted Sales**	**Total Savings Rate**	**Funds Available to Offset Appropriation**
	$ (54,144,564)	**$ (2,707,228)**	**$ (56,851,792)**	**30.8%**	**32.0%**	**$ (87,661,118)**

DeCA Variable Pricing Feasibility Study

Option 4: Expanded BVI Program with Margin Applied to BVI Items Only - Economic Assessment

2003 DeCA Sales

	Sales Impact		Surcharge at 5%	Sales + Surcharge	Average Savings	Total Savings	Commercial Equivalent	Margin Available to Offset Appropriation	
Total Sales	$	5,037,782,568	$ 251,889,128	$ 5,289,671,696	32.1%		$ 7,790,385,414		
ex. Tobacco	$	(197,500,000)	$ (9,875,000	$ (207,375,000					Acquired from Exchanges
ex. Meat	$	(380,563,651)	$ (19,028,183)	$ (399,591,834)					DeCA Commissary Store Statistics FY 2003, meat acquired from govt
ex Produce	$	(342,525,527)	$ (17,126,276)	$ (359,651,804)					DeCA Commissary Store Statistics FY 2003, produce acquired from govt
Total Sales Impacted	$	4,117,193,369	$ 205,859,669	$ 4,323,053,058	30.9%	32.1%	$ 6,258,179,134		

Expanded BVI Program to Commercial PL Norms - % of Unit Sales:

Total Sales Impacted	$ 4,117,193,369	Current % of units	18.9%	
Average Unit Price	$ 1.75	Current % of $ sales	2.87%	
Total DeCA Units	2,359,423,146		1.92%	

		Price per unit	Sales	% of $ sales
Current BVI Units	62,998,598	$ 1.2200	$ 76,855,850	1.5%
Current NB Units	2,296,424,548	$ 1.7590	$ 4,039,414,297	98.1%
			$ 4,116,270,147	

Increase scope of BVI program

BVI Units at PL Norms	469,525,206	
Current BVI units	62,998,598	
Loss of NB Units	406,526,608	
Loss of NB Sales $	$ 715,083,821	Unit price $ 1.7590
Average BVI unit price	$ 1.22	
BVI Sales at DeCA prices	$ 572,820,751	
Increase in BVI sales	$ 495,964,902	

Total Sales with Expanded BVI program at PL Norms $ 3,998,074,469

Starting Sales total	$ 4,117,193,369	$ 205,859,669	$ 4,323,053,058	30.9%	32.1%	$ 6,258,179,134		
Expanded BVI program	$ 572,820,751	$ 28,641,038	$ 601,461,789	32.1%		$ 885,805,285		
National brand sales	$ 3,324,350,476	$ 166,216,524	$ 3,490,546,999	30.9%		$ 5,051,442,806		
Total sales with Exp. BVI	$ 3,897,151,227	$ 194,857,561	$ 4,092,009,788	31.1%	32.2%	$ 5,936,824,091		
NB % of $ sales	85.3%							
BVI % of $ sales	14.7%							

Impact Analysis

1) Price Change on BVI Program

Unit Share (Adjustment to) 12.690% / 19.900%

Total DeCA Units	2,359,423,146						
BVI Units	469,525,206						
Baseline BVI Sales	$ 572,820,751	$ 28,641,038	$ 601,461,789	32.1%		$ 885,805,285	
Price change	$ 72,690,953	$ 3,634,548	$ 76,325,501			$ 885,805,285	$ 72,690,953
Total BVI Sales	$ 645,511,705	$ 32,275,586	$ 677,787,290	23.5%		$ 885,805,285	$ 72,690,953
National Brand Sales	$ 3,324,350,476	$ 166,216,524	$ 3,490,546,999	30.9%		$ 5,051,442,806	
Total Sales	$ 3,969,842,180	$ 198,492,109	$ 4,168,334,289	29.8%	31.2%	$ 5,937,248,121	$ 72,690,953
NB % of $ sales	83.7%						
BVI % of $ sales	16.3%						

2) Negative customer reaction due to price increase - BVI impact only 0.00%

Sales	$ 3,969,842,180	$ 198,492,109	$ 4,168,334,289	29.8%	31.2%	$ 5,937,248,121	$ 72,690,953
Volume change	$ -	$ -	$ -	29.8%	31.2%	$ -	$ -
Result 2	$ 3,969,842,180	$ 198,492,109	$ 4,168,334,289	29.8%	31.2%	$ 5,937,248,121	$ 72,690,953

3) Cost Impacts

3a) Lost Vendor Support - Replacement Cost $ (21,930,992)

Sales	$ 3,969,842,180	$ 198,492,109	$ 4,168,334,289	29.8%	31.2%	$ 5,937,248,121	$ 72,690,953
Increased Cost	$ -	$ -	$ -			$ 5,937,248,121	$ (21,930,992)
Result 3a	$ 3,969,842,180	$ 198,492,109	$ 4,168,334,289				$ 50,759,961

3b) Lost Promotional (Pricing) Support - Product Cost Impact 1.30%

Sales	$ 3,969,842,180	$ 198,492,109	$ 4,168,334,289	29.8%	31.2%	$ 5,937,248,121	$ 50,759,961	
Increased Cost	$ -	$ -	$ -			$ 5,937,248,121	$ (43,216,296)	Lost promotional support on national brands only
Result	$ 3,969,842,180	$ 198,492,109	$ 4,168,334,289	29.8%	31.2%	$ 5,937,248,121	$ 7,543,665	

Amount passed on to the customer 33.00%

Sales	$ 3,969,842,180	$ 198,492,109	$ 4,168,334,289	29.8%	31.2%	$ 5,937,248,121	$ 7,543,665	
Price passed through	$ 14,261,378	$ 713,069	$ 14,974,447			$ 5,937,248,121	$ 14,261,378	Lost promotional support on national brands only
Result 3b	$ 3,984,103,558	$ 199,205,178	$ 4,183,308,736	29.5%	31.0%	$ 5,937,248,121	$ 21,805,043	

3c) Incremental Operating Costs - Category Management and Pricing $ (500,000)

Sales	$ 3,984,103,558	$ 199,205,178	$ 4,183,308,736	29.5%	31.0%	$ 5,937,248,121	$ 21,805,043
Increased Cost	$ -	$ -	$ -			$ 5,937,248,121	$ (500,000)
Result 3c	$ 3,984,103,558	$ 199,205,178	$ 4,183,308,736				$ 21,305,043

Total Impacts

	Sales	Surcharge	Sales + Surcharge	Savings Rate on	Total Savings	Funds Available to Offset
	$ (133,738,821)	$ (6,686,941)	$ (140,425,762)	31.5%	31.0%	$ 21,305,043

Appendix 10 – Cost-to-Serve Analysis

ACCOUNT PROFITABILITY COMPARISON
(As % of Gross Sales)

P&L Category	P&L Line Item	Groc. Channel	DeCA	DeCA Sources and Comments
REVENUE				
	Gross Sales	100%	100.0%	
EXPENSES				
COST-TO-SERVE				
	Discounts & Allowances			
	(Cash Discount)	1.8%	0.1%	Rolled backed into surcharge. Not in COGS.
	(Bracket Price Discount)	2.0%	0.0%	Vendors give best price to DeCA. Straight pass through to DeCA. In COGS.
	(Non-reconcilable Deductions)	0.4%	0.0%	No measurable promotional discrepancies at DeCA.
	(Damage/Reclamation)	0.2%	0.0%	DeCA charge customers 1%. Already in COGS.
	(Product Returns)	0.1%	0.0%	Already in COGS.
	Sub-Total	4.5%	0.1%	
	Distribution			
	(Transportation)	3.7%	3.5%	WBC estimate, average between Mass and Grocery distributors.
	(Warehouse Expense)	0.0%	0.0%	Included in transportation number.
	Sub-Total	3.7%	3.5%	
	Trade & Consumer Spending			
	(Promotional Funds)	11.5%	14.1%	Vendors spend 2.6% more than commercial retailers. Source: IRI
	(Slotting Fees)	0.3%	0.0%	Assumes DeCA is not driving new items into the warehouse.
	(Sponsorship/Events)	0.2%	0.0%	Annual case lot sale, ALA training event, and support for scholarship program.
	(Consumer Advertising)	3.8%	3.8%	WBC estimates same as commercial channels.
	Sub-Total	15.8%	17.9%	
	Sales & Marketing Personnel Deployment			
	(Headquarter/Retail Sales Coverage)	2.7%	1.4%	Selling costs excluding vendor stocking.
	(Retail Stocking)	0.0%	0.4%	DeCA vendor stocking support.
	(Retail Reset/Implementation)	1.8%	0.1%	DeCA reset support.
	(Marketing Support)	1.3%	0.0%	No measurable marketing support.
	(Category Management Support)	2.1%	1.1%	Vendor interviews. Less category management support.
	(Other Selling Expenses)	0.4%	0.2%	Vendor interviews. Less selling expense.
	Sub-Total	8.3%	3.1%	
COST OF GOODS SOLD				Drayage rates included in DeCA COGS.
	(Cost of Goods Sold)	52.5%	58.8%	WBC supermarket database comparison (four supermarket chains) to DeCA data.
COST OF DOING BUSINESS				
	(Syndicated Data Expense)	1.5%	0.2%	Vendor interviews. Less analyses and category management support.
	(Capital Expense)	0.0%	0.0%	Not required for this analysis.
	Sub-Total	1.5%	0.2%	
	Contribution to Profit	**13.7%**	**16.4%**	
	Difference	2.7%		

Source: Grocery column cost-to-serve data from WBC database.

Appendix 11 – Best Value Item Category-level Variety Requirements

Supermarket Private Label Standards
Number of Items per Category

Department	Master Category	PL/National	DeCA BVI Assortment	Supermarket Private Label Assortment	Difference: Supermarket vs. DeCA BVI
Dairy	Category - Butter	Private	0	2	2
Dairy	Category - Cottage Cheese	Private	0	6	6
Dairy	Category - Cream Cheese/Cr Chs Spread	Private	1	2	1
Dairy	Category - Creams/Creamers	Private	0	9	9
Dairy	Category - Desserts - Rfg	Private	0	2	2
Dairy	Category - Dough/Biscuit Dough - Rfg	Private	1	14	13
Dairy	Category - Margarine/Spreads/Butter Blen	Private	4	6	2
Dairy	Category - Milk	Private	0	23	23
Dairy	Category - Natural Cheese	Private	10	45	35
Dairy	Category - Processed Cheese	Private	1	2	1
Dairy	Category - Rfg Dips	Private	0	7	7
Dairy	Category - Rfg Fresh Eggs	Private	0	7	7
Dairy	Category - Rfg Juices/Drinks	Private	3	14	11
Dairy	Category - Sour Cream	Private	0	7	7
Dairy	Category - Yogurt	Private	0	29	29
Dairy - Total		**Private**	**20**	**173**	**153**
Dry Grocery	Category - All Other Sauces	Private	1	7	6
Dry Grocery	Category - Aseptic Juices	Private	0	7	7
Dry Grocery	Category - Baby Food	Private	33	2	-31
Dry Grocery	Category - Baby Formula/Electrolytes	Private	0	7	7
Dry Grocery	Category - Baked Beans/Pork & Beans	Private	0	15	15
Dry Grocery	Category - Bakery Snacks	Private	0	9	9
Dry Grocery	Category - Baking Mixes	Private	0	7	7
Dry Grocery	Category - Baking Needs	Private	2	3	1
Dry Grocery	Category - Baking Nuts	Private	1	0	-1
Dry Grocery	Category - Barbeque Sauce	Private	0	7	7
Dry Grocery	Category - Bottled Juices - SS	Private	7	46	39
Dry Grocery	Category - Bottled Water	Private	0	16	16
Dry Grocery	Category - Breadcrumbs/Batters	Private	0	3	3
Dry Grocery	Category - Canned Meat	Private	2	5	3
Dry Grocery	Category - Canned/Bottled Fruit	Private	12	48	36
Dry Grocery	Category - Carbonated Beverages	Private	0	52	52
Dry Grocery	Category - Coffee	Private	6	25	19
Dry Grocery	Category - Coffee Creamer - SS	Private	0	10	10
Dry Grocery	Category - Cold Cereal	Private	6	34	28
Dry Grocery	Category - Cookies	Private	0	38	38
Dry Grocery	Category - Crackers	Private	0	14	14
Dry Grocery	Category - Croutons	Private	3	4	1
Dry Grocery	Category - Dip/Dip Mixes - SS	Private	1	0	-1
Dry Grocery	Category - Dried Fruit	Private	0	6	6
Dry Grocery	Category - Drink Mixes	Private	2	6	4
Dry Grocery	Category - Dry Beans/Vegetables	Private	0	11	11
Dry Grocery	Category - Dry Fruit Snacks	Private	0	7	7
Dry Grocery	Category - Dry Packaged Dinners	Private	1	17	16
Dry Grocery	Category - English Muffins	Private	0	3	3
Dry Grocery	Category - Evaporated/Condensed Milk	Private	1	2	1
Dry Grocery	Category - Flour/Meal	Private	0	4	4
Dry Grocery	Category - Fresh Bread & Rolls	Private	0	16	16
Dry Grocery	Category - Gelatin/Pudding Mixes	Private	0	4	4
Dry Grocery	Category - Glazed Fruit	Private	0	11	11
Dry Grocery	Category - Gravy/Sauce Mixes	Private	14	13	-1
Dry Grocery	Category - Gum	Private	0	6	6
Dry Grocery	Category - Hot Cereal	Private	0	8	8
Dry Grocery	Category - Ice Cream Cones/Mixes	Private	0	14	14
Dry Grocery	Category - Instant Potatoes	Private	0	6	6
Dry Grocery	Category - Jellies/Jams/Honey	Private	2	23	21
Dry Grocery	Category - Juice/Drink Concentrate - SS	Private	0	2	2
Dry Grocery	Category - Marshmallows	Private	0	3	3
Dry Grocery	Category - Mayonnaise	Private	1	2	1
Dry Grocery	Category - Mexican Foods	Private	0	8	8
Dry Grocery	Category - Mexican Sauce	Private	0	8	8
Dry Grocery	Category - Milk Flavoring/Cocoa Mixes	Private	0	5	5
Dry Grocery	Category - Misc. Snacks	Private	1	0	-1
Dry Grocery	Category - Mustard & Ketchup	Private	0	12	12
Dry Grocery	Category - Oriental Food	Private	0	9	9
Dry Grocery	Category - Pancake Mixes	Private	1	2	1
Dry Grocery	Category - Pasta	Private	3	33	30
Dry Grocery	Category - Peanut Butter	Private	2	8	6
Dry Grocery	Category - Pickles/Relish/Olives	Private	0	34	34
Dry Grocery	Category - Popcorn/Popcorn Oil	Private	0	9	9

Supermarket Private Label Standards
Number of Items per Category

Department	Master Category	PL/National	DeCA BVI Assortment	Supermarket Private Label Assortment	Difference: Supermarket vs. DeCA BVI
Dry Grocery	Category - Powdered Milk	Private	0	2	2
Dry Grocery	Category - Rice	Private	4	17	13
Dry Grocery	Category - Salad Dressings - SS	Private	2	15	13
Dry Grocery	Category - Salad Toppings	Private	3	0	-3
Dry Grocery	Category - Salty Snacks	Private	0	37	37
Dry Grocery	Category - Seafood -SS	Private	9	5	-4
Dry Grocery	Category - Shortening & Oil	Private	0	21	21
Dry Grocery	Category - Snack Bars/Granola Bars	Private	0	7	7
Dry Grocery	Category - Snack Nuts/Seeds/Corn Nuts	Private	0	18	18
Dry Grocery	Category - Soup	Private	4	25	21
Dry Grocery	Category - Spaghetti/Italian Sauce	Private	2	22	20
Dry Grocery	Category - Spices/Seasonings	Private	0	15	15
Dry Grocery	Category - Sports Drinks	Private	0	3	3
Dry Grocery	Category - SS Dinners	Private	3	5	2
Dry Grocery	Category - Steak/Worcestershire Sauce	Private	0	2	2
Dry Grocery	Category - Stuffing Mixes	Private	0	3	3
Dry Grocery	Category - Sugar	Private	0	6	6
Dry Grocery	Category - Sugar Substitutes	Private	0	1	1
Dry Grocery	Category - Syrup/Molasses	Private	0	6	6
Dry Grocery	Category - Tea - Bags/Loose	Private	1	5	4
Dry Grocery	Category - Tea - Instant Tea Mixes	Private	2	0	-2
Dry Grocery	Category - Toaster Pastries/Tarts	Private	3	5	2
Dry Grocery	Category - Tomato Products	Private	1	24	23
Dry Grocery	Category - Total Chocolate Candy	Private	1	3	2
Dry Grocery	Category - Total Non-Chocolate Candy	Private	0	34	34
Dry Grocery	Category - Vegetables	Private	10	67	57
Dry Grocery	Category - Vinegar	Private	0	8	8
Dry Grocery - Total		**Private**	**147**	**1003**	**856**
Frozen	Category - Fz Appetizers/Snack Rolls	Private	0	1	1
Frozen	Category - Fz Bread/Fz Dough	Private	0	3	3
Frozen	Category - Fz Breakfast Food	Private	1	5	4
Frozen	Category - Fz Desserts/Topping	Private	0	14	14
Frozen	Category - Fz Dinners/Entrees	Private	9	34	25
Frozen	Category - Fz Fruit	Private	0	2	2
Frozen	Category - Fz Meat	Private	3	0	-3
Frozen	Category - Fz Novelties	Private	0	12	12
Frozen	Category - Fz Pasta	Private	3	4	1
Frozen	Category - Fz Pies	Private	0	2	2
Frozen	Category - Fz Pizza	Private	9	7	-2
Frozen	Category - Fz Plain Vegetables	Private	0	41	41
Frozen	Category - Fz Potatoes/Onions	Private	3	11	8
Frozen	Category - Fz Poultry	Private	9	0	-9
Frozen	Category - Fz Prepared Vegetables	Private	0	2	2
Frozen	Category - Fz Seafood	Private	6	4	-3
Frozen	Category - Ice Cream/Sherbet	Private	0	41	41
Frozen	Category - Juices - Frozen	Private	7	15	8
Frozen-Total		**Private**	**50**	**199**	**149**
General Merchandise	Category - Batteries	Private	2	0	-2
General Merchandise	Category - Candles	Private	3	0	-3
General Merchandise	Category - Charcoal	Private	0	4	4
General Merchandise	Category - Charcoal Lighter Fluid	Private	0	3	3
General Merchandise	Category - Firelog/Firestarter/Firewood	Private	0	1	1
General Merchandise	Category - Foil Pans	Private	3	14	11
General Merchandise	Category - Light Bulbs	Private	0	10	10
General Merchandise	Category - Lighters	Private	0	4	4
General Merchandise	Category - Office Products	Private	0	34	34
General Merchandise - Total		**Private**	**8**	**70**	**62**
HBC	Category - Cold/Allergy/Sinus Liquids	Private	0	20	20
HBC	Category - Cold/Allergy/Sinus Tablets	Private	1	67	66
HBC	Category - Cotton Balls/Swabs	Private	0	11	11
HBC	Category - Cough Drops	Private	0	3	3
HBC	Category - Cough Syrup	Private	0	13	13
HBC	Category - Denture Products	Private	0	2	2
HBC	Category - Deodorant	Private	0	6	6
HBC	Category - External Analgesic Rubs	Private	0	2	2
HBC	Category - Eye/Contact Lens Care Product	Private	0	20	20
HBC	Category - Family Planning	Private	0	2	2
HBC	Category - First Aid Accessories	Private	0	18	18
HBC	Category - First Aid Treatment	Private	0	56	56
HBC	Category - Foot Care Products	Private	0	16	16

Supermarket Private Label Standards
Number of Items per Category

Department	Master Category	PL/National	DeCA BVI Assortment	Supermarket Private Label Assortment	Difference: Supermarket vs. DeCA BVI
HBC	Category - Gastrointestinal - Liquid	Private	0	48	48
HBC	Category - Gastrointestinal - Tablets	Private	2	25	23
HBC	Category - Hair Conditioner	Private	6	14	8
HBC	Category - Hand & Body Lotion	Private	1	46	45
HBC	Category - Internal Analgesics	Private	7	61	54
HBC	Category - Mouthwash	Private	0	15	15
HBC	Category - Pantyhose/Nylons	Private	0	34	34
HBC	Category - Razors	Private	9	16	7
HBC	Category - Shampoo	Private	7	23	16
HBC	Category - Shaving Cream	Private	2	6	4
HBC	Category - Shaving Lotion/Mens Fragrance	Private	0	8	8
HBC	Category - Skin Care	Private	0	7	7
HBC	Category - Toothbrush/Dental Accessories	Private	2	22	20
HBC	Category - Toothpaste	Private	3	14	11
HBC	Category - Vitamins	Private	2	122	120
HBC	Category - Weight Con/Nutrition Liq/Pwd	Private	0	10	10
HBC - Total		**Private**	**42**	**702**	**660**
Non-Edibles	Category - Adult Incontinence	Private	0	17	17
Non-Edibles	Category - Air Fresheners	Private	1	1	0
Non-Edibles	Category - Baby Accessories	Private	0	4	4
Non-Edibles	Category - Baby Needs	Private	0	18	18
Non-Edibles	Category - Bleach	Private	0	7	7
Non-Edibles	Category - Cat Food	Private	8	39	31
Non-Edibles	Category - Cat/Dog Litter	Private	0	11	11
Non-Edibles	Category - Cleaning Tools/Mops/Brooms	Private	0	2	2
Non-Edibles	Category - Coffee Filters	Private	4	7	3
Non-Edibles	Category - Cups & Plates	Private	3	27	24
Non-Edibles	Category - Diapers	Private	0	5	5
Non-Edibles	Category - Dish Detergent	Private	1	8	7
Non-Edibles	Category - Disposable Tableware	Private	4	0	-4
Non-Edibles	Category - Dog Food	Private	13	31	18
Non-Edibles	Category - Fabric Softener Liquid	Private	0	5	5
Non-Edibles	Category - Fabric Softener Sheets	Private	1	8	7
Non-Edibles	Category - Facial Tissue	Private	1	7	6
Non-Edibles	Category - Foils & Wraps	Private	2	5	3
Non-Edibles	Category - Food & Trash Bags	Private	8	31	23
Non-Edibles	Category - Household Cleaner	Private	6	22	16
Non-Edibles	Category - Household Cleaner Cloths	Private	0	2	2
Non-Edibles	Category - Kitchen Storage	Private	2	0	-2
Non-Edibles	Category - Laundry Care	Private	0	1	1
Non-Edibles	Category - Laundry Detergent	Private	2	9	7
Non-Edibles	Category - Moist Towelettes	Private	1	0	-1
Non-Edibles	Category - Paper Napkins	Private	1	4	3
Non-Edibles	Category - Paper Towels	Private	1	15	14
Non-Edibles	Category - Pet Supplies	Private	0	4	4
Non-Edibles	Category - Sanitary Napkins/Tampons	Private	0	41	41
Non-Edibles	Category - Soap	Private	5	12	7
Non-Edibles	Category - Sponges & Scouring Pads	Private	2	12	10
Non-Edibles	Category - Toilet Tissue	Private	0	4	4
Non-Edibles - Total		**Private**	**66**	**360**	**294**
Prepack Deli	Category - Breakfast Meats	Private	2	0	-2
Prepack Deli	Category - Dinner Sausage	Private	3	0	-3
Prepack Deli	Category - Frankfurters	Private	0	4	4
Prepack Deli	Category - Luncheon Meats	Private	4	1	-3
Prepack Deli	Category - Lunches - Rfg	Private	2	0	-2
Prepack Deli	Category - Rfg Meat/Poultry Products	Private	0	11	11
Prepack Deli - Total		**Private**	**11**	**16**	**5**
Total Private Label/BVI			**344**	**2523**	**2179**

This page intentionally left blank

Appendix 12 - Sources

AC Nielsen 2002, www.militarymarket.com.

ACSI Special Segment Questionnaire/Study (2002 and 2003), Claes Fornell International Group and the University of Michigan Business School.

American Logistics Association, "Focus Group Learnings: Reasons for Use and Non-Use of Commissaries and Exchanges," Conducted by Willard Bishop Consulting, June 1995.

Banc of America Securities Equity Research, "Is The Price Right? Quarterly BAS Seven Market Pricing Study: Second Quarter of 2003," August 2003.

Customer Service Evaluation System (CSES) Survey, 1999, 2003.

DeCA Data Warehouse

DeCA, "Military Commissary Study", Consumer Link 1998.

DeCA Price Comparison Study, October 2003

Defense Commissary Agency, Operating and Capital Budget, February 2003.

Defense Commissary Patron Survey (2000), Market Facts, February 2000.

Department of Defense Data – Supplied by DeCA (2004).

DoD 1330.17-R, Armed Services Commissary Regulations (ASCR)

Dhar, Sanjay K., and Stephen J. Hoch (1997), "Why Store Brand Penetration Varies by Retailer," Selected Paper 78, April 1997.

Food Marketing Institute, Supermarket Facts: Industry Overview 2002, at www.fmi.org.

Frito-Lay, Inc., "Understanding the Commissary Shopper", Qualitative Research Conducted by Elrick & Lavidge, May 1997.

Hoch, Stephen J., Xavier Dreze, Mary E. Purk (1994), "EDLP, Hi-Lo, and Margin Arithmetic," Journal of Marketing, April 1994.

Hoch, Stephen J., and Leonard M. Lodish (1998), "Store Brands and Category Management," Wharton School, University of Pennsylvania, March 1998.

Kraft Foods, Military Business Topline Analysis 1996, based on Nielsen Household Panel Data, 52 Weeks Ending 6/2/96.

Information Resources Inc., and DeCA Data Warehouse, Price/Volume Changes, 99-Weeks, April 2001-February 2003.

Jones, Eugene (1997), "An Analysis of Consumer Food Shopping Behavior Using Supermarket Scanner Data: Differences by Income and Location," American Journal of Agricultural Economics, December 1997.

Litvack, David S., Roger J. Calantone, Paul R. Warshaw (1985), "An Examination of Short-Term Retail Grocery Price Effects," Journal of Retailing, Fall 1985.

Military Grocer 2003 Commissary Fact Book, September 2002.

Military Grocer 2004 Commissary Fact Book, September 2003.

Partners in Loyalty Marketing, Inc.

Private Label Manufacturers Association, PLMA's 2003 Private Label Yearbook.

US Code, Title 10, Subtitle A, Part IV, Chapter 137, Section 2304.

US Code, Title 10, Subtitle A, Part IV, Chapter 147, Sections 2482, 2482a, 2483, 2484, 2486, 2487, 2488, 2490a, and 2492.

US Code, Title 10, Subtitle A, Part IV, Chapter 159, Section 2685.

Wal-Mart Store Finder, www.walmart.com.

Willard Bishop Consulting, 2003 Store Format Report.

Willard Bishop Consulting Retail Pricing Analyses, 2004.

Willard Bishop Consulting Three-Chain Supermarket Database.

2002 Market Scope / 2003 Market Scope, Trade Dimensions International, Inc.

Appendix 13 - Interviews

Major General Richard Alexander, National Guard Association of the United States

Carroll Allred, Category Manager, Produce – Defense Commissary Agency

Jed Becker, Dunham & Smith Agencies

Cassell Brabble, Chief, Resale Stock Fund Division – Defense Commissary Agency

Alan Burton, American Logistics Association

Ben Butler, Director of Legislation – National Association of Uniformed Services

John Chapla, Professional Staff – U.S. House of Representatives Armed Services Committee

Tony Collazo, Deputy Program Manager – Defense Commissary Agency

Wayne Correia, Supervisory Budget Analyst – Defense Commissary Agency

Greg Davis, H.J. Heinz

Rena Dial, Buyer – Defense Commissary Agency

Laura Dixon, DMI

Ken Dunbar, Reset Specialist – Defense Commissary Agency

Jack Fowler, Category Manager, Meat – Defense Commissary Agency

Ken Goss, Air Force Association

Thomas Hackett, Chief, Systems Division – Defense Commissary Agency

Bud Hand, Frito-Lay

Mike Henties, Proctor and Gamble

Mike Higgins, Professional Staff – U.S. House of Representatives Armed Services Committee

Frank Hogan, Overseas Service Corporation

Jerry Jared, MDV Nash Finch

Alan Jones, Deputy Chief, Product Support – Defense Commissary Agency

Jim Juliana, Coalition of Military Distributors

Michael Kennedy, Campbell Soup

Sylvia Kid, Association of the U.S. Army

Lee Langley, Military Officers Association of America

John Madar, Commissary Management Specialist – Defense Commissary Agency

Jay Manning, Deputy General Counsel – Defense Commissary Agency

Doug McAlister, Coca-Cola

David McMurtry, Kraft

Bill Mehler, Special Projects Officer – Defense Commissary Agency

Mary Michael, Promotions Manager – Defense Commissary Agency

John Molino, Deputy Undersecretary of Defense (Military Community and Family Policy)

Craig Murphy, SuperValu

Major General Richard Murray, National Association of Uniformed Services

Dave Newhart, Buyer – Defense Commissary Agency

Joseph Nikolai, Consultant to Defense Commissary Agency

Alan Nissalke, American Logistics Association

Patrick Nixon, Deputy Director – Defense Commissary Agency

Joe Olding, Webco

Thomas Owens, Operations Business Analyst – Defense Commissary Agency

Bill Patterson, Commissary Management Specialist – Defense Commissary Agency

Bill Pickett, Category Manager – Defense Commissary Agency

Joyce Raezer, National Military Family Association

Totalua Ripley, Commissary Management Specialist – Defense Commissary Agency

Carol Ricker, Business System Manager – Defense Commissary Agency

Rip Rowen, Armed Forces Marketing Council

Jeanne Sanders, Kimberly-Clark

Dan Sclater, Legislative Liaison – Defense Commissary Agency

Al Silva, Buyer – Defense Commissary Agency

LaRue Smith, Buyer – Defense Commissary Agency

Jimaye Sones, Director of Accounting – Defense Commissary Agency

Bill Stanley, Clorox

Donna Starkus-Ward, Distribution Support Manager – Defense Commissary Agency

Dudley Tademy, Professional Staff – U.S. House of Representatives Armed Services Committee

Robert Vitikacs, Executive Director for Operations and Product Support – Defense Commissary Agency

Fred Watts, Buyer – Defense Commissary Agency

Janis White, Director of Resale Activities and NAF Policy

Major General Michael Wiedemer, Director – Defense Commissary Agency